Me, Myself and Self-harm: An Investigation of the Influences of Self-Perceptions in Self-harm and Recovery

Rebecca Forrester

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Supervised by:

Dr. Peter Taylor

Dr. Susan Mitzman

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Introductory Chapter: Thesis Overview

The feelings and ideas a person holds about themselves are commonly cited as key markers of wellbeing (Cheng, Fung & Chan, 2009). Many people who engage in acts of self-harm (SH) hold negative views about themselves and, as such, may struggle to maintain a sense of wellbeing. Engaging in SH can further negatively impact how a person feels about themselves through its stigmatization in society (Taylor, Hawtom, Fortune & Kapur, 2009) and how a person evaluates themselves compared to others (Flett et al., 2012). These factors are likely to affect a person's path to recovery (Grøholt, Ekeberg, Wichstrøm, & Haldorsen, 2005) and do so in different ways, for different people (Wills, 2012).

The term 'self-harm' can include a number of different behaviors, carried out with different motivations (McAllister, 2003). As such, the author has adopted distinct definitions in-line with the focus for each paper. Paper one examines the relationship between non-suicidal self-injury (NSSI) and self-esteem in adulthood. The author is not aware of any previous review being undertaken on this subject; therefore, this paper seeks to make sense of this current gap in literature and provide a systematic review of the current body of quantitative research. The review then provides a narrative synthesis of key variables drawn out from the literature that support an understanding of the relationship between self-esteem and NSSI. It concludes by highlighting the clinical implications of low self-esteem and NSSI and provides space for discussion of relevant future applications of the review's findings. Paper two presents empirical research which expands on the self-esteem and NSSI relationship to examine the roles of self-perceptions in SH recovery. In this paper, SH includes acts with and without intent to die (Klonsky, Oltmanns, & Turkheimer, 2003). Acts with suicidal intent were included in the empirical paper as its focus is on recovery. As a history of NSSI and suicidal acts frequently occur together (Cloutier, Martin, Kennedy, Nixon & Muehlenkamp, 2010), the author did not wish to exclude those who may have

engaged in suicidal behavior at one (or more) points in their lives as their experiences may support an understanding around what processes are important in recovery. The author explored this subject through understanding the 'Self' as being made of multiple self-views (Lester, 2003). In addition, the author included participants' views of relevant others as this may also be important in SH recovery (Young, Sproeber, Groschwitz, Preiss & Plener, 2014). Using Repertory Grid methodology (Kelly, 1955) with people who SH, the author examined key aspects of SH that may influence a person's path to recovery. Considering self-perceptions may be a useful consideration when working with people who SH and applications of this approach in clinical practice, along with future research directions, are discussed.

References

Cheng, S. T., Fung, H. H., & Chan, A. (2009). Self-perception and psychological well-being: the benefits of foreseeing a worse future. *Psychology and Aging*, *24*(3), 623. doi: http://dx.doi.org/10.1037/a0016410.

Cloutier, P., Martin, J., Kennedy, A., Nixon, M. K., & Muehlenkamp, J. J. (2010). Characteristics and co-occurrence of adolescent non-suicidal self-injury and suicidal behaviours in pediatric emergency crisis services. *Journal of Youth and Adolescence*, *39*(3), 259-269. doi: http://dx.doi.org/10.1007/s10964-009-9465-1.

Flett, G. L., Goldstein, A. L., Hewitt, P. L., & Wekerle, C. (2012). Predictors of deliberate self-harm behavior among emerging adolescents: An initial test of a self-punitiveness model. *Current Psychology*, *31*(1), 49-64. doi: http://dx.doi.org/10.1007/s12144-012-9130-9.

Grøholt, B., Ekeberg, Ø., Wichstrøm, L., & Haldorsen, T. (2005). Suicidal and nonsuicidal adolescents: Different factors contribute to self-esteem. *Suicide and Life-Threatening Behavior*, *35*(5), 525-535. doi: http://dx.doi.org/10.1521/suli.2005.35.5.525.

Kelly, G. A. (1955). *The Psychology of Personal Constructs.* New York, NY: Norton.

Klonsky, E. D., Oltmanns, T. F. & Turkheimer, E. (2003). Deliberate self-harm in a nonclinical population: Prevalence and psychological correlates. *American Journal of Psychiatry*, 60: 1501-1508. doi: http://dx.doi.org/10.1176/appi.ajp.160.8.1501.

Lester, D. (2003). Comment on "The self as a problem": alternative conceptions of the multiple self. *The Journal of Socio-Economics, 32*(5), 499-502. doi: 10.1016/j.socec.2003.08.010.

McAllister, M. (2003). Multiple meanings of self-harm: A critical review. *International Journal of Mental Health Nursing*, *12*(3), 177-185. doi: 10.1046/j.1440-0979.2003.00287.x.

Taylor, T. L., Hawton, K., Fortune, S., & Kapur, N. (2009). Attitudes towards clinical services among people who self-harm: systematic review. *The British Journal of Psychiatry, 194*(2), 104-110. doi: 10.1192/bjp.bp.107.046425.

Wills, K.A. (2012). What does recovery mean to adults who self-injure? An interpretive phenomenological analysis. *International Journal of Psychosocial Rehabilitation*, 17(1), 93-116.

Young, R., Sproeber, N., Groschwitz, R. C., Preiss, M., & Plener, P. L. (2014). Why alternative teenagers self-harm: Exploring the link between non-suicidal self-injury, attempted suicide and adolescent identity. *BMC Psychiatry*, *14*(137), 1-14. doi: 10.1186/1471-244X-14-137.

Chapter 1: Systematic Review

An Examination of the Relationship between Self-Esteem and Non-Suicidal Self-Injury in Adulthood[1]

[1]To be submitted to the International Journal of Psychosocial Rehabilitation (word limit 10,000, guidelines in Appendix A).

Abstract

Non-suicidal self-injury (NSSI) is a destructive act to oneself that may be related to low self-esteem. However, little is known about the nature of this relationship in adulthood. Therefore, this review synthesized the available literature. Articles were independently identified and risk of bias assessed by two reviewers searching PsycINFO, CINAHL, Medline and Web of Science databases. Inclusion criteria were: (1) a mean sample age of eighteen years or over (2) full manuscripts available in English (3) assessment(s) of NSSI (4) assessment(s) of self-esteem. Nineteen studies were identified and indicated a significant relationship between low self-esteem and NSSI. Results suggested that although low self-esteem and NSSI are related, there are a number of factors which also influence this relationship. It will be important for clinicians to consider the impact of self-esteem in those seeking support for NSSI. Further research should undertake longitudinal research to better understand the self-esteem and NSSI relationship.

Keywords: Self-esteem, non-suicidal self-injury, systematic review, adults.

Introduction

Non-suicidal self-injury (NSSI) is a major public health concern (Garcia-Nieto, Carballo, Díaz de Neira Hernando, Leon-Martinez & Baca-Garcia, 2015), with lifetime prevalence rates in adulthood reported as ranging between 5.9% (Klonsky, 2011) and 23.2% (Muehlenkamp & Gutierrez, 2007). Gaining a clear picture of adult prevalence can be difficult due to limited research (Whitlock et al., 2011) and the stigma surrounding such acts (Borrill, Lorenz & Abbasnejad, 2012). This has led to reports that there are consistent underestimations of the rates of NSSI in the general population (Taylor et al., 2011). NSSI can be defined as "the deliberate, direct destruction of body tissue without conscious suicidal intent" (Lloyd-Richardson, Perrine, Dierker & Kelley, 2007) and commonly includes behaviors such as cutting, burning and scratching the skin, along with hitting or banging oneself (Zetterqvist, 2015). Despite NSSI pertaining to behaviors occurring without suicidal intent, it is associated with subsequent risk of suicidal acts (Hamza, Stewart & Willoughby, 2012). In addition, despite the intention behind such behaviors being reported as non-suicidal, the acts carried out can be serious. For example, Douglas and colleagues indicated that one third of "near-fatal" self-harm behaviors presenting at a hospital did not appear to be associated with suicidal thoughts during the act (Douglas et al., 2004). Notably, NSSI research has focused on children and adolescents and there has been criticism of the paucity of research undertaken with adults (Kapur, Cooper, O'Connor & Hawton, 2013).

People who engage in NSSI are a heterogeneous group (Lloyd-Richardson et al., 2007), with a number of possible factors leading to the engagement and maintenance of such acts (Garisch & Wilson, 2015). Early adverse life events are possible key contributors to engagement in NSSI including: childhood sexual abuse (Jacobson & Gould, 2007); parental emotional neglect (Gratz, 2006); bullying (Claes, Luyckx, Baetens, Van de Van & Witterman, 2015) or; having a peer who also engages in NSSI (Deliberto & Nock, 2008).

Adverse life events have also been hypothesized as contributors to low self-esteem (Marshall et al., 2015). Therefore examining the influence of a psychological mediator such as self-esteem may be helpful in understanding what maintains a relationship between adverse events and NSSI.

Self-esteem can be understood as a general, global attribution of liking oneself (Leary & Baumeister, 2000) and low self-esteem has been identified as a risk factor for problems related to NSSI, such as suicide (Gooding et al., 2015) and depression (Orth, Robins & Roberts, 2008). In addition, concepts aligned with low self-esteem are cited as motives for NSSI such as: self-punishment (Glassman, Weierich, Hooley, Deliberto & Nock, 2007); disappointment in oneself (Stroehmer, Edel, Pott, Juckel & Haussleiter, 2015) and; feelings of shame (Schoenleber, Berenbaum & Motl, 2014). This suggests an influence of negative feelings towards the Self in both initiating (Muehlenkamp, Bagge, Tull & Gratz, 2013) and maintaining (Lloyd-Richardson et al., 2007) NSSI. Theories surrounding why low self-esteem may lead to NSSI have been formulated. For example, people with low self-esteem may find it easier to engage in NSSI due to a lack of self-regard (Kittila, 2012). Indeed, a lack of regard for the body was found to moderate the relationship between emotional dysregulation and engaging in NSSI (Muehlenkamp et al., 2013). In addition, low self-esteem is an adverse state which people may wish to alleviate through NSSI as hypothesized through the Experiential Avoidance Model (Chapman, Gratz & Brown, 2006). This was examined by Hooley and colleagues who targeted a self-esteem-based intervention for reducing NSSI. Their intervention demonstrated a decrease in NSSI ideation and decreased tolerance to pain (Hooley & St. Germain, 2013). Therefore, self-esteem may be an important factor in maintaining NSSI acts in adulthood and an important target for NSSI interventions.

The aim of this current study is to systematically review and synthesize the available literature surrounding the relationship between NSSI and self-esteem in adulthood.

Method

Pre-registration of Review Protocol

The review protocol was pre-registered with the International Prospective Register of Systematic Reviews (PROSPERO) with the registration number CRD42016032954.

Search Strategy

. The electronic databases PsycINFO, CINAHL, Medline and Web of Science were searched by the author from date of inception until January 2016. A number of different search terns were included to capture of the definition of self-esteem used for this review as an attribution or feeling one has about oneself (Leary & Baumeister, 2000). It is recognized that while the terms and concepts included are different, they are overlapping and unified through their negative, evaluative judgement of self that may be related to NSSI. The following search terms combined with Boolean operators were included: ("self-esteem" OR "self-perception*" OR “self identit*" OR “self crit*” OR “self-attack*”) AND (“self-harm*” or “self injur*” or NSSI or DSH or “self mutilat*” OR “parasuicid*”). First, abstracts and titles were screened for inclusion independently by the first author (RF) and in parallel by a fourth author (HS)[1]. Then, the first author read full-texts of the remaining papers. Hand searches of references in eligible articles and key review articles were also undertaken. Corresponding authors of included papers were contacted concerning any other published or unpublished studies that may be eligible for inclusion. Nineteen articles were eligible for inclusion in this review, with the search results illustrated in Figure 1.

[1] A research assistant (HS) supported the screening for studies to be included in this review.

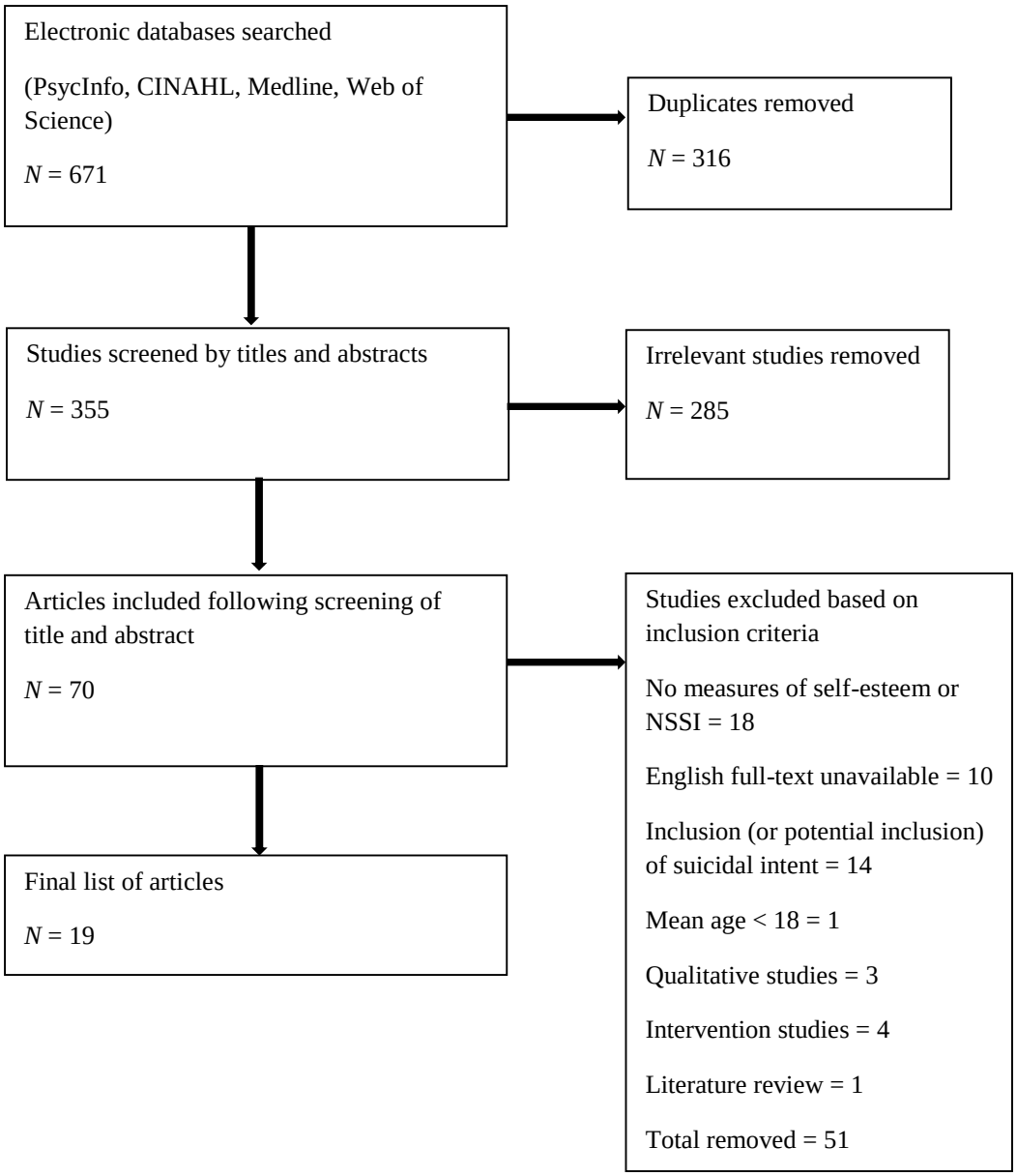

Figure 1. Flow chart of articles identified via literature search and screening.

Inclusion and Exclusion Criteria

Inclusion criteria for this review required papers to have: a mean sample age of eighteen years or over; full-text available in the English language; assessment(s) of NSSI; and assessment(s) of self-esteem. Self-esteem was defined as: "a person's overall evaluation or appraisal of his or her own worth" (Waite, McManus & Shafran, 2012). Concepts such as self-criticism were included as measures of self-esteem, as they involve a personal judgement of self-worth or value. Exclusion criteria were: over half the sample had a co-morbid

diagnosis of an intellectual disability; qualitative studies and; studies where it was unclear if self-injury demonstrated underlying suicidal intent.

Case-control, cross-sectional, correlational and prospective designs were included. Experimental designs where a level of self-esteem was manipulated in some way were not included. Trials of interventions aimed at altering levels of self-esteem were included where relevant data was available concerning the link between self-esteem and self-harm in the control group.

Risk of Bias

To evaluate the risk of bias, independent assessments of selected papers were undertaken by the first and fourth authors. The fifth author (KJ)[2] resolved disagreements in quality ratings through discussion and reaching a consensus. A quality assessment tool was adapted and used from previous studies (Williams, Plassman, Burke, Holsinger & Benjamin, 2010; Taylor, Hutton & Wood, 2015). The adaptions made pertained to providing a relevant context for the reviewed articles. For example, changing 'validated method for ascertaining UHR status' to 'validated method for ascertaining self-esteem'. No adaptions were made to the methods the tool used to assess articles. This tool provided a quality rating of: 'yes', 'no', 'partial' or 'cannot tell' to a number of elements within each paper. The adapted version for this review can be found in Appendix B. In addition, the author followed the PRISMA guidelines for reporting items in a systematic review (Moher, Liberati, Tetzlaff & Altman, 2009).

[2] A researcher (KJ) supported the review through assisting in the Risk of Bias assessments.

Results

Study Characteristics

An overview of study characteristics and relevant extracted data can be found in Table 1. All nineteen studies were cross-sectional in design. Eleven studies used student samples, three studies used general population samples, and five studies used clinical populations, one of which used a homeless sample (included within this group due to high incidences of mental health difficulties in such groups; Fazel, Geddes & Kushel, 2014). Most studies were undertaken in the USA, with the remaining from Western countries (UK, Canada and Denmark). All studies had a majority of White or Caucasian participants (where this was reported). Most studies used young samples, with mean ages of participants being 25 years or younger. In addition, most studies had more female than male participants, with two exceptions (Christoffersen, Møhl, DePanfilis & Vammen, 2015; Unger, Kipke, Simon, Montgomery & Johnson, 1997). The majority of studies used NSSI and no-NSSI groups, but three studies used only NSSI participants (Armiento, Hamza & Willoughby, 2014; Flett, Goldstein, Hewitt & Wekerle, 2012; Gilbert et al., 2010).

Risk of Bias Assessments

The risk of bias assessments of study methodology is reported in Table 2. There were a number of methodological problems that arose, which were concerned with: the justification of sample size; the lack of controlling of confounding factors; and inadequate description of the cohort. Only one study (Cawood & Huprich, 2011) reported a justification for sample size through a power calculation. This is important as there may be a risk of self-esteem and NSSI analyses being underpowered, thereby increasing the risk of Type II error. However, the main focus of included studies was often not the self-esteem and NSSI relationship, which may explain why power calculations were not undertaken for the analyses of interest for this review. Sample sizes varied across studies. Three studies reported samples

between 60 and 94 and six studies reported sample sizes between 117 and 268. In addition, a number of studies used large sample sizes. For example, eight studies reported sample sizes between 302 and 609 and two studies reported sample sizes of 1,102 and 2,986, thereby reducing the risk of analyses being underpowered.

All studies were cross-sectional in design. This limits the conclusions that can be made around the direction of effects. The majority of studies used student samples with a majority of under 25 year olds who were described as White or Caucasian. Gender differences were accounted for in one study, where levels of self-criticism were significantly higher in females, compared to males, who engaged in NSSI (Flett et al., 2012). Within the context of NSSI, the age of included samples may be reasonably generalizable as this group appear to be fairly representative of a large proportion of the adult NSSI population (Swannell, Martin, Page, Hasking & St. John, 2014). However, the high proportion of White or Caucasian subjects in studies may limit generalizability. This has been highlighted as a notable limitation within NSSI research (Cooper et al., 2006). In addition, a limited description of samples was found across a number of studies. For example, socio-economic status was rarely considered. This is important in order to consider how typically less represented groups (e.g. those who are unemployed) may be affected by self-esteem and NSSI.

A number of studies considered confounding factors. These included: histories of trauma and abuse; depression, personality disorder(s) and comorbid diagnostic presentations. However, these variables were rarely given full consideration. This may be due to the focus of the reviewed papers not concerning the relationship between NSSI and self-esteem. This is important as the omission of relevant confounding variables may lead to biased and inconsistent estimates of the relationship between self-esteem and NSSI.

Measures Used in Studies

All but two studies (Batey, May & Andrade, 2010; Hooley, Ho, Slater & Lockshin, 2010) used validated measures of self-esteem. The Rosenberg Self-esteem Scale (RSES; Rosenberg, 1965) was the most common measurement (k = 8 studies), which conceptualizes self-esteem as a global positive or negative attitude towards the self (Rosenberg, Schooler, Schoenbach & Rosenberg, 1995). The majority of studies used validated measures to examine NSSI. However, six studies used non-validated, or single-item measures.

Relationship between NSSI and Self-esteem

Table 1 outlines the key investigations and relevant outcomes from each included study. Thirteen studies (seven student, three general, three clinical populations) reported a comparison of self-esteem in NSSI and no-NSSI control groups. All but one of these studies (Claes et al., 2015) indicated that lower levels of self-esteem were found in NSSI groups, compared to no-NSSI groups (d = 0.23 – 5.08; r=-0.38). Two studies used multidimensional measures of self-esteem. Gilbert and colleagues used a multidimensional self-criticism measure (Gilbert et al., 2010). This included a self-persecution subscale, which was highlighted as the key contributor (β=0.42, p<0.01) to predicting the presence of NSSI behaviors in a clinical sample compared to social rank, shame, self-correction and 'inadequate self' self-perception. Muehlenkamp and colleagues used a multidimensional measure to examine both self-esteem and body satisfaction within their sample of female inpatients with an eating disorder (Muehlenkamp, Claes, Smits, Peat & Vandereycken, 2011). Their results indicated associations between both lower self-esteem and body satisfactions and increased frequency, duration and method of NSSI (r = 0.14-0.32).

Self-esteem and NSSI-related Behaviors

Four findings from three studies (two student and one general population sample) examined self-esteem between those engaging in direct NSSI and 'indirect NSSI', such as

risk taking behaviors. Three findings reported no significant differences in self-esteem between direct and indirect forms of NSSI. First, students at 'higher risk' of engaging in NSSI (for example, students engaging in drug use) showed no difference in levels of self-worth from those at 'low risk' of engaging in NSSI (Batey et al., 2010). Second, students with NSSI and body modifications such as tattoos and piercings showed no difference in self-esteem compared to a NSSI-only group (Aizenman & Conover-Jensen, 2007). Third, a general population study highlighted no significant differences in levels of self-esteem between direct NSSI and indirect NSSI (for example, engaging in abusive relationships), although subsequently found significantly higher self-criticism was reported in direct, compared to indirect NSSI (St. Germain & Hooley, 2012).

Self-esteem as a Predictor of NSSI Severity

Five studies (four student and one clinical populations) reported the role of self-esteem in understanding NSSI severity. In two student samples, NSSI frequency was moderated by: less regard for the body (β=-0.34; Muehlenkamp et al., 2013) and; those with greater feelings of self-disgust had engaged in NSSI more recently (d=1.13; Smith Steele, Weitzman, Trueba & Meuret, 2015). Within a clinical population, those with lower self-esteem engaged in NSSI more frequently (r = 0.13-0.24), for longer (r = 0.14-0.24) and used more methods of self-injury (r = 0.16-0.32; Muehlenkamp, et al., 2011). This association was not found by Harrison (2009) as there were no significant associations between levels of self-esteem and the breadth and severity of NSSI. In addition, greater self-esteem approached significance (OR= 1.58, p=0.06) for an association with a greater tendency to disclose NSSI (proposed by the authors as indication of a less severe course of NSSI) within a student sample (Armiento et al., 2014).

Self-esteem as a Mediator of the Relationship between Adverse Events and NSSI

Three studies (two student and one clinical populations) suggested that levels of self-esteem mediated the relationship between previous adverse events and engagement in NSSI. As all studies were cross-sectional, mediation analyses is limited as it is not possible to infer the direction of effects. Within student samples, one paper cited self-esteem as the only significant factor (amongst parental overprotection, parent and peer attachment, emotional expressivity, and affect intensity) which mediated the relationship between poor 'early parental care' and the probability of engaging in NSSI (Harrison, 2009). In addition, Burke and colleagues indicated self-criticism as mediating the relationship between a 'high behavioral approach system sensitivity' (a hypersensitivity to goal-striving) and frequency of NSSI both in the past year and in lifetime histories (Burke, Hamilton, Abramson & Alloy, 2015). Furthermore, within a group of patients with eating disorders, low self-esteem mediated a relationship between childhood abuse and body dissatisfaction, leading then to NSSI (Muehlenkamp et al., 2011).

Confounding factors' Influence on a Self-esteem and NSSI relationship

Eight outcomes from six studies examined the impact of confounding factors on the relationship between self-esteem and NSSI. The influence of abuse histories were examined in one study and it was found that the relationship between NSSI and low self-esteem was maintained when controlling for a history of abuse (Smith et al., 2015). The influences of psychopathology was examined in the remaining five studies. Personality disorder symptoms were found to partially or fully mediate the relationship between self-esteem and NSSI (Cawood & Huprich, 2011). Controlling for depressive symptoms eliminated the relationship between self-disgust and NSSI in one study (Smith et al., 2015), although the depression scale used overlaps with self-esteem (Depression Anxiety Stress Scale; Lovibond & Lovibond, 1995). Limitations with depression scales were also highlighted by Gilbert and

colleagues who noted that their use of the Hospital Anxiety and Depression Scale (HADS; Zigmond & Smith, 1983) may have contributed to the lack of a bivariate correlation between NSSI and depression. This was due to its focus on adhedonic features of depression, rather than cognitive features which authors indicated may be associated to self-esteem (Gilbert et al., 2010). However, a relationship between NSSI and body regard remained significant whilst controlling for depression (Muehlenkamp et al., 2011). Controlling for anxiety did not impact the relationship between self-criticism and NSSI (though the effect size was not reported; Gilbert et al., 2010). Self-criticism was associated with NSSI frequency at low levels, but not high levels of positive affect (suggesting a possible protective effect of positive affect), but this was not evidenced for negative affect (β=-.16; Cohen et al., 2015).

Specific Factors within Self-esteem Influence NSSI

Two studies, using clinical samples, examined factors within self-esteem. Gilbert and colleagues found that it was self-persecution that predicted NSSI behaviors over and above other proposed self-esteem measures (social rank, shame, self-correction and 'inadequate self'; Gilbert et al., 2010). St. Germain and Hooley reported that self-criticism was able to explain differences in direct and non-direct NSSI, whereas a more general self-esteem measure could not (St. Germain & Hooley, 2012).

Table 1

Description of Included Studies

Author, Year, Country	Design	Description of Participants	NSSI Measure	Self-esteem Measure(s)	Key investigation(s)	Key outcome(s) (effect size; where reported)
Student Population (n=11)						
Aizenman et al. (2007), USA	Cross-sectional	College students (n=1102) NSSI=549; no NSSI=553 Mean age (SD) = 20.2 (2.57) 82% female 69% White	Expression through the Body Questionnaire (Ainzenman et al. 2007) developed in course of study	Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1965)	Self-esteem in NSSI *vs*. no NSSI in both 'body modified and no body modification' groups	Significantly lower self-esteem in NSSI compared to no-NSSI groups (d=0.73).
					Self-esteem in NSSI only *vs*. a NSSI plus 'body modified' group	No significant difference in self-esteem in NSSI only compared to NSSI and tattoos/piercings.
Armiento et al. (2014), Canada	Cross-sectional	University students (n=268) NSSI=268, no NSSI=0 Mean age =19.15 71% female 87.5% Caucasian SES: mean levels of parental education: 'some college, university or apprenticeship program'	Inventory of Statements about Self-injury (ISAS; Klonsky & Glenn, 2009)	RSES	Self-esteem in disclosed NSSI *vs*. non-disclosed NSSI	Trend towards significant association between self-esteem and disclosing NSSI behaviors (OR = 1.58, p=0.06).
Batey et al. (2010), UK	Cross-sectional	University students (n=432) NSSI=102 no NSSI=330 Mean age = 25.1 71.3% female	Non-validated NSSI scale	Non-validated self-worth scale	Self-worth in NSSI vs. no NSSI	Significantly lower self-worth in NSSI compared to no-NSSI (d=0.61).
					Low self-worth as a risk factor to NSSI in a non-NSSI group	No significant difference in self-worth for those at low and high risk of NSSI.
Burke et al. (2015), USA	Cross-sectional	High school students (n=177) NSSI=101; no NSSI=76 Mean age (SD) = 18.69 (0.84) 72% female 69.5% Caucasian	The Form and Function of Self-Injury Scale (FAFSI; Jenkins & Schmitz, 2012)	The Depressive Experiences Questionnaire-self-criticism subscale (DEQ-SC subscale; Blatt, D'Afflitti & Quinlan, 1976)	Self-criticism as a mediator between HBAS and NSSI	Self-criticism mediated the relationship between NSSI frequency over lifetime and past year in HBAS group.
Cawood et al. (2011), USA	Cross-sectional	College students (n=302) NSSI=102; no NSSI=200 Mean age(SD) = 18.4 (0.50) 74.2% female 65% Caucasian	Deliberate Self-harm Inventory-short version (DSHI-s; Lundh et al., 2007)	RSES	Self-esteem in NSSI vs no NSSI	Significantly lower self-esteem in NSSI compared to no-NSSI (d=0.77).
					PD diagnoses as mediators to a NSSI and self-esteem relationship	Avoidant and Negativistic PDs fully mediated the relationship between NSSI and self-esteem. Borderline, Antisocial, Dependent, and Depressive PDs partially mediated the relationship between NSSI and self-esteem.

Author, Year, Country	Design	Description of Participants	NSSI Measure	Self-esteem Measure(s)	Key investigation(s)	Key outcome(s) (effect size; where reported)
Cohen et al. (2015), USA	Cross-sectional	Adolescents from schools and colleges (n=117) NSSI=50%; no NSSI=50%[b] Mean age(SD) = 18.69 (0.84) 72% female 69.5% Caucasian	FAFSI	DEQ-SC subscale	The role of self-criticism's interaction with NA and PA in predicting NSSI frequency	Self-criticism significantly associated with NSSI frequency at lower levels of PA (Beta=-.16, t=-2.20) but not higher PA. NA did not moderate the relationship between self-criticism and NSSI frequency.
Flett et al. (2012), Canada	Cross-sectional	University students (n=94) 64.9% female 50% Canadian-born NSSI=94; no NSSI=0	Deliberate Self-harm Inventory (DSHI; Gratz, 2001) with items from Sansone et al. (1998) assessing broader 'self-harm behaviors'	Attitudes towards Self Scale-self-criticism subscale (ATS-sc; Carver & Ganellen, 1983)	Gender differences in self-criticism and NSSI	Significantly greater self-criticism in women compared to men engaging in NSSI (d=0.24).
Harrison (2009), USA	Cross-sectional	University students (n=334) 77.9% female 54.2% White NSSI=119 no NSSI=215 Mean age NSSI(SD)=23.92 (5.45) Mean age no-NSSI(SD) = 25.88 (7.61)	DSHI-s	RSES	Self-esteem in NSSI vs no-NSSI groups	Significantly lower self-esteem in NSSI compared to no-NSSI (d=0.45).
					The role of self-esteem in the relationship between parental care and NSSI	Self-esteem mediated the relationship between early parental care and later NSSI.
					The role of self-esteem in predicting the severity and breadth of NSSI	No significant difference in self-esteem predicting the severity and breadth of NSSI.
Muehlenkamp et al. (2013), USA	Cross-sectional	Undergraduate students NSSI (n=398) NSSI=102; no NSSI=296 Mean age(SD) = 20.25 (2.45) 74.6% female 62.3% White	DSHI	The Body Attitudes Scale (BAS; Walsh, 1999)	Body regard in NSSI vs no-NSSI groups	Significantly lower body regard in NSSI compared to no-NSSI (r=-0.38).
					The moderating role of body regard in the relationship between emotional dysregulation and NSSI	Significantly lower body regard predicted NSSI frequency (r=-.038, p<0.01).
					The influence of covariates in low body regards in predicting NSSI	Low body regard significantly predicted NSSI when controlling for BPD symptoms and NA (β=-0.34, p<0.01).
Nelson & Muehlenkamp (2012), USA	Cross-sectional	Undergraduate students (n=341) NSSI=90; no NSSI=251 Mean age(SD) = 20.2 (1.98) 82.4% female 92.3% White	DSHI	The Body Esteem Scale (BES; Franzoi & Shield, 1994)	The role of body-attitudes in NSSI vs. no-NSSI	Significantly lower body-esteem in NSSI compared to no-NSSI group (d=5.08).

Author, Year, Country	Design	Description of Participants	NSSI Measure	Self-esteem Measure(s)	Key investigation(s)	Key outcome(s) (effect size; where reported)
Smith et al. (2015), USA	Cross-sectional	Undergraduate students (n=609) Lifetime history of NSSI n = 60, historic (>12 months ago) n=25 and 'current' n=35. no NSSI n=489 Mean age(SD) = 19.59 (2.94) 74.3% female 74.1% Caucasian	ISAS	Self-Disgust Scale (SDS; Overton, Markland, Taggart, Bagshaw & Simpson, 2008)	The role of self-disgust in NSSI status: recent *vs.* lifetime *vs.* no history	Significantly greater self-disgust in recent, followed by lifetime history, followed by no history of NSSI (d=1.13).
					The role of self-disgust in NSSI (history *vs.* no history) and depressive symptoms; history of child sexual abuse covariates	No significance difference for self-disgust and NSSI when controlling for depression. Significantly greater self-disgust in NSSI when controlling for sexual abuse (OR=9.39, p<.01).
General Population (n=3)						
Christoffersen et al. (2015), Denmark	Cross-sectional	N=2980 NSSI=114; no NSSI=2866 Age range = 24-25 years 52.2% male 100% Danish	Single question on self-harm with follow-up questions on intention of harm	RSES	The role of self-esteem in NSSI vs. no-NSSI	Significantly lower self-esteem in NSSI compared to no-NSSI (OR=5.09; p<0.0001).
Hooley et al. (2010), USA	Cross-sectional	N=60 NSSI=31; no NSSI=29 Mean age = 22.4 (5.2) 88.3% female	Telephone interview developed by the author	Self-Rating Scale (SRS; Hooley et al., 2010) developed in the course of the study	The role of negative self-beliefs in NSSI *vs.* no-NSSI	Significantly more negative self-beliefs in NSSI compared to no-NSSI groups (d=0.91).
St. Germain & Hooley (2012), USA	Cross-sectional	N=156 NSSI=50; indirect NSSI=38; no NSSI=68 Mean age(SD) = 25.2 (9.0) 69.8% female	Author adapted Self-harm Inventory (SHI; Sansone et al., 1998)	The Schedule for Non-adaptive and Adaptive Personality-self-harm subscale: Low self-esteem (SNAP: LSE; Clark, 1993)	The role of self-esteem in NSSI vs. no-NSSI	Significantly lower self-esteem in NSSI compared to no-NSSI groups.
					The role of self-esteem in direct and indirect NSSI	No significant difference in levels of low self-esteem between direct and indirect NSSI (d=1.75).
				SRS	The role of self-criticism in NSSI vs. no-NSSI and indirect NSSI	Significantly higher self-criticism in NSSI compared to both no-NSSI and indirect-NSSI groups (d=1.23).
					The role of self-criticism in direct vs. indirect NSSI	Significantly higher self-criticism in direct NSSI compared to indirect-NSSI (d=0.54).
Clinical Population (n=5)						
Claes et al. (2015), UK	Cross-sectional	'Transsexualism' patients (n=155) NSSI=57; no NSSI=98 Mean age = 34.52 (14.21) 66.5% trans female SES: Employed 44.5% student 13.5% volunteer work 5.8% housewife/husband 1.9% disabled 4.5% unemployed 22.6% other 7.1%	Self-Injury Questionnaire (SIQ-TR; Claes, 2007)	RSES	The role of self-esteem in NSSI vs. non-NSSI trans-patients	No significant differences in self-esteem between NSSI and non-NSSI groups.

Author, Year, Country	Design	Description of Participants	NSSI Measure	Self-esteem Measure(s)	Key investigation(s)	Key outcome(s) (effect size; where reported)
Davey et al. (2015), UK	Controlled cross-sectional	Trans participants from a gender identity clinic and general population controls. (n=194) Clinical NSSI=49; control NSSI=21; clinical non-NSSI=48; control non-NSSI=76 mean age = 36.18 (14.85) clinical sample: female n=60, male n=37; control sample: female n=60, male n=37 clinical group: 89% white, control group 96% white SES: clinical sample 40.2% employed 15.5% student control group 36.1% employed 34% student	SIQ-TR	RSES	Comparison of self-esteem in trans-NSSI groups *vs.* trans no-NSSI and no-trans no-NSSI groups	Significantly lower self-esteem in trans-NSSI compared to both trans-no-NSSI (d=0.93) and non-trans no-NSSI (d=1.63) groups.
Gilbert et al. (2010), UK	Cross-sectional	Inpatients and day patients (n=73) NSSI=73 non-NSSI=0 Mean age=41.3 (12.14) 29 males, 44 females	SHI	The Forms of Self-criticizing/attacking Scale (Gilbert et al., 2004) AND The Functions of Self-criticizing/attacking Scale (Gilbert et al., 2004)	To explore the role of different forms and functions of self-criticism in NSSI	Self-persecution significantly predicted NSSI (Beta=0.42, p<0.01) over other forms and functions of NSSI: 'self-hating' 'inadequate self', 'self-correction' and 'inadequate self'.
					To explore the relationship between NSSI and self-criticism when controlling for anxiety	Significantly greater relationship between self-criticism and NSSI when controlling for anxiety compared to other forms and functions of NSSI (as above).
Muehlenkamp et al. (2011), USA	Cross-sectional	Female inpatients with an eating disorder (ED) (n=422) NSSI=146; no NSSI=276 Mean age = 21.6 (6.27) 100% female	SIQ-TR	Ineffectiveness subscales from the Dutch version (Van Strien & Owens, 2003) of the Eating Disorder Inventory-II (EDI-II, Garner, 1991): low self-esteem and body dissatisfactions AND Body Attitudes Test (Probst et al, 1995) subscales: General body dissatisfaction and negative appreciation body size	To explore the relationship between self-esteem and NSSI: frequency, duration and method	Significantly lower self-esteem and body dissatisfaction related to all aspects of NSSI: frequency (r=0.15-0.24), duration (r=0.14-0.24) and method (r=0.16-0.32).
					To examine pathways from childhood trauma/low self-esteem to NSSI	Low self-esteem and NSSI in ED patients are related through 'indirect paths': i) Childhood abuse to low self-esteem to pathology and from pathology to dissociation to NSSI; ii) Childhood abuse to low self-esteem and from low self-esteem to body dissatisfaction to NSSI.
Unger et al. (1997), USA	Cross-sectional	Homeless people (n=426) NSSI= 56.3% of sample 19-23 years 278 males 148 females 51% Caucasian SES: all homeless	Single-item question on NSSI behaviors	RSES	The relationship between low self-esteem and NSSI	Significantly lower self-esteem in NSSI compared to no-NSSI group (d=0.23).

Note. NSSI non-suicidal self-injury; SD standard deviation; PD personality disorder; NA negative affect; PA positive affect; BPD borderline personality disorder; OR odds ratio; HBAS, high behavior activation sensitivity; SES socio-economic status;

Table 2

Risk of Bias Assessment of Included Papers

Authors	Unbiased selection of cohort	Selection minimizes baseline differences in prognostic factors[a]	Sample size calculated	Adequate description of the cohort	Validated method for ascertaining self-esteem	Validated method for ascertaining self-harm	Blinding of Researchers	Adequate follow-up period[b]	Missing data	Controls for confounding factors[a, c]	Analytic methods appropriate[a, c]
Aizenman (2007)	Partial	n/a	No	Partial	Yes	No	Yes	n/a	cannot tell	Partial	Yes
Armiento (2014)	Partial	n/a	No	Yes	Yes	Yes	No	n/a	No	No	Yes
Batey (2010)	Partial	n/a	No	Partial	Yes	Yes	Yes	n/a	No	Partial	Yes
Burke (2015)	Partial	n/a	No	Partial	Yes	Yes	No	n/a	No	Partial	Yes
Cawood (2011)	Yes	n/a	Yes	Yes	Yes	Yes	Yes	n/a	No	cannot tell	Yes
Christoffersen (2015)	Yes	n/a	cannot tell	Partial	Yes	No	cannot tell	n/a	No	No	Yes
Claes (2015)	Yes	n/a	No	Yes	Yes	Yes	No	n/a	No	Yes	Yes
Cohen (2015)	Yes	n/a	cannot tell	Partial	Yes	Yes	cannot tell	n/a	No	No	Yes
Davey (2015)	Yes	Yes	No	Yes	Yes	Yes	Yes	n/a	Partial	No	Yes
Flett (2012)	Yes	n/a	No	Yes	Yes	Yes	No	n/a	No	Partial	Yes
Gilbert (2010)	Yes	n/a	cannot tell	Partial	Yes	Yes	cannot tell	n/a	No	Partial	Yes
Harrison (2009)	Partial	n/a	No	Yes	Yes	Yes	No	n/a	Partial	Partial	Partial
Hooley (2010)	Partial	n/a	cannot tell	Partial	Partial	Partial	Yes	n/a	No	cannot tell	yes

Authors	Unbiased selection of cohort	Selection minimizes baseline differences in prognostic factors[a]	Sample size calculated	Adequate description of the cohort	Validated method for ascertaining self-esteem	Validated method for ascertaining self-harm	Blinding of Researchers	Adequate follow-up period[b]	Missing data	Controls for confounding factors[a, c]	Analytic methods appropriate[a, c]
Muehlenkamp (2011)	Yes	n/a	cannot tell	Partial	Partial	Partial	Yes	n/a	No	cannot tell	Yes
Muehlenkamp (2013)	Yes	n/a	No	Partial	Yes	Yes	Yes	n/a	No	Yes	Yes
Nelson (2012)	Partial	n/a	cannot tell	Partial	Yes	Yes	Yes	n/a	No	No	Yes
Smith (2015)	Yes	n/a	cannot tell	Partial	Yes	Yes	Yes	n/a	No	Yes	Yes
St. Germain (2012)	Yes	Partial	cannot tell	Partial	Yes	Yes	Yes	n/a	No	Partial	Partial
Unger (1997)	Yes	n/a	No	Yes	Yes	No	Yes	n/a	No	Partial	Yes

Note. [a]Group comparison studies only.
[b]Longitudinal studies only.
[c]Studies testing for predictors or correlates of non-suicidal self-injury.

Discussion

The aim of this review was to examine the relationship between self-esteem and NSSI in adulthood. The findings indicated that low self-esteem was a common feature in adults who engage in NSSI, or have a history of NSSI. Self-esteem was found to be significantly lower in these groups compared with adults without NSSI histories. This finding was largely consistent across clinical groups, student and general population samples. There was one clinical exception to these findings, where Claes and colleagues (2015) noted no differences in self-esteem across NSSI and no-NSSI groups (who were described as "untreated individuals with a diagnosis of transsexualism"; p. 3). This may be due to the authors investigating a population that may demonstrate low self-esteem generally. For example, those awaiting gender reassignment have been identified at increased risks of experiencing factors associated with low self-esteem, such as discrimination and depression (Pitts, Couch, Mulcare, Croy & Mitchell, 2009). There was, however, wide variability in the size of the NSSI and self-esteem relationship across studies (d = 0.23 - 5.08, r=-0.38). This was perhaps unsurprising as both NSSI and low self-esteem may occur across heterogeneous groups (Goodson, Buhi & Dunsmore, 2006; Plener, Schumacher, Munz & Groschwitz, 2015) and have been found to be highly variable, especially within student samples (Chung et al., 2014). The findings also suggested that low self-esteem may not be specific to NSSI, as it was also found in NSSI-related behaviors. It may be that low self-esteem is an adverse psychological state which may be dealt with in a number of ways. NSSI may represent one of these ways, however other related behaviors may also provide alternative ways to cope (Mann, Hosman, Schaalma & de Vries, 2004).

Self-esteem may be a useful assessment in considering NSSI severity, such as frequency and currency of behaviors. Despite some studies reporting an inverse relationship between self-esteem and NSSI severity, one study did not find this relationship (Harrison,

2009). This study, unlike the others indicating NSSI severity, had more males than females engaging in NSSI, which may have influenced the results.

Several studies suggested that self-esteem may act as a mediator between adverse events and later engagement in NSSI, although the cross-sectional designs greatly limit inferences of the direction of effect. This is an important finding as by understanding the contribution of self-esteem to the onset of NSSI, more effectively targeted interventions for individuals with a history of adverse events may be developed (Murray, Rose, Bellavia, Holmes & Kusche, 2002). Two studies also indicated that particular factors within self-esteem may elicit NSSI, namely self-persecution and self-criticism (Gilbert et al., 2010; St. Germain & Hooley, 2012). It may be that self-esteem and NSSI exist in a reciprocal relationship (Tanner, Hasking & Martin, 2014). For example, adverse events are likely to inform the way a person sees themselves so NSSI may develop a way to self-punish (Glassman et al., 2007). The stigmatization of NSSI in society may lead to further impact self-esteem (Borrill et al., 2012). In addition, the potential reinforcement of negative self-views through subsequent life events such as: exam pressures (Hudd et al., 2000) or; bullying (Seals & Young, 2003); may be managed through NSSI to support a person to 'escape' from such unwanted emotional experiences, as described in the Experiential Avoidance Model (Chapman et al., 2006).

Confounding variables, namely abuse histories and mental health diagnoses, were common within the reviewed studies. Despite recognition of these factors in the majority of studies, there were no consistencies in controlling or accounting for such factors when assessing for the relationship between low self-esteem and NSSI. It may be that this relationship could be better explained by confounding factors (Kaess et al., 2013). In addition, where studies accounted for confounding variables, there were mixed findings. It may be that low self-esteem is an epiphenomena of other difficulties, such as depression,

which may be causing NSSI (Sowislo & Orth, 2013). Future research may be supported by undertaking larger studies with explicit considerations of potential confounding factors.

All reviewed studies were cross-sectional in design. Therefore, no considerations could be given to the potential influence of variability in self-esteem over time. This is particularly pertinent as the majority of reviewed studies used samples under the age of 25, where self-esteem is said to be particularly varying (Chung et al., 2014). Given the incidence of NSSI appears to decrease with age (Moran et al., 2012), understanding the contribution of a self-esteem and NSSI relationship at key time-points (such as early adulthood) is important with respect to providing timely and targeted support (Trepal, Wester & Merchant, 2015). In addition, causality, or even the direction of relationships, cannot be inferred. Future research may benefit from undertaking longitudinal studies to examine any direction of the relationship. Experimental studies could also be helpful, however there are clear ethical issues regarding NSSI (Prinstein, 2008). A focus on the impact of single-case experiments for NSSI interventions may be a helpful way to facilitate understanding around this (Nock, 2012).

Limitations, Future Recommendations and Clinical Implications

Self-esteem is a broadly conceptualized term. This review included studies where more specific forms of self-esteem, such as ‘self-disgust’ (Smith et al., 2015) or ‘self-persecution’ (Gilbert et al., 2010) were assessed. However, this ‘broad-brush approach', appeared an appropriate starting point as no systematic review of the NSSI and self-esteem relationship in adulthood was known to exist. Future research may benefit from further examination of specific factors within self-esteem (such as self-punishment) and what factors may increase or decrease these particular feelings in order to better target therapeutic interventions (Laye-Gindhu & Schonert-Reichl, 2005).

Some of the reviewed papers demonstrated limitations. First, across all studies participants provided retrospective accounts of NSSI, but current appraisals of their self-esteem. This may reduce the validity of any relationship as current feelings of self-esteem may not be the same as the level of self-esteem felt during an act of NSSI (Victor & Klonsky, 2014). However, as lower levels of self-esteem increased NSSI severity (such as how recently or frequently the injury took place) these factors appear to remain influential to one another (Nock, 2009). Future research may benefit from examining the fluid nature of self-esteem (especially in emerging adulthood) through: longitudinal studies or; through momentary evaluations, such as can be conducted through the experience sampling method, which has been used in previous NSSI studies (e.g. Zaki, Coifman, Rafaeli, Berenson & Downey, 2013). Examining self-esteem fluidity may be particularly helpful for adults at a time of transition (such as beginning university, starting a new job, or leaving accommodation settings such as foster care) for those who engage in NSSI (Moran et al., 2012). Second, despite a number of comprehensive NSSI measures being used, reported results most usually provided a dichotomous question regarding engagement in NSSI (e.g. yes or no) when it considered the relationship to self-esteem. In addition, some measures (such as the SHI; Sansone et al., 1998) included questions around overdose despite this method of self-injury not being included in NSSI definitions, for which there has been criticism (Kapur et al., 2013). Future research could examine the characteristics of NSSI acts more broadly (e.g. frequency or methods of NSSI; and requirement for hospital treatment), the motivations behind such acts (e.g. to escape unwanted negative emotions; to self-regulate) and their relationship to self-esteem. Third, the majority of studies had more female than male participants. This may have influenced the self-esteem and NSSI relationship as self-criticism has been hypothesized as presenting significantly higher in female, as compared to males who engage in NSSI (Flett et al., 2012). Although gender differences in NSSI

prevalence have not been found in recent literature (Andover, Pepper, & Gibb, 2007), research has suggested that females may be more likely to meet criteria for a proposed NSSI disorder (Zetterqvist, Lundh, Dahlstrom & Svedin, 2013). Therefore, these factors may have influenced the reviews findings. Future research will benefit from examining underrepresented groups, such as men.

Vulnerable groups may benefit from frequent assessment of self-esteem levels. For example, it may be helpful to assess self-esteem in those who have experienced adverse events and to work to improve self-esteem as a therapeutic target to decrease the likelihood of engaging in NSSI (Mann et al., 2004). There is emerging evidence surrounding the benefits of interventions targeting self-esteem, such as Hooley and St. Germain (2013) who found that increasing self-esteem reduced the willingness for participants to endure pain, such that might be endured during NSSI. Further intervention and longitudinal studies may lend to a greater understanding of the potential benefits of improving self-esteem for those who engage in NSSI.

Conclusions

This review examined the relationship between self-esteem and NSSI in adulthood. There were clear findings that lower levels of self-esteem are found in those who engage in NSSI, compared to those who do not and self-esteem was associated with NSSI severity. The direction of this relationship, however, could not be ascertained. There was evidence of self-esteem mediating a relationship between adverse events and mixed evidence surrounding the influence of mental health diagnoses. Self-esteem may be an important target for therapeutic interventions when working with those who engage in NSSI.

References

Aizenman, M., & Conover-Jensen, M. A. C. (2007). Speaking through the body: The incidence of self-injury, piercing, and tattooing among college students. *Journal of College Counseling*, *10*(1), 27-44. doi: http://dx.doi.org/10.1002/j.2161-1882.2007.tb00004.x.

Andover, M. S., Pepper, C. M., & Gibb, B. E. (2007). Self-mutilation and coping strategies in a college sample. *Suicide and Life-Threatening Behavior*, *37*(2), 238-243. doi: 10.1521/suli.2007.37.2.238.

Armiento, J. S., Hamza, C. A., & Willoughby, T. (2014). An Examination of Disclosure of Nonsuicidal Self-injury among University Students. *Journal of Community & Applied Social Psychology*, *24*(6), 518-533. doi: 10.1002/casp.2190.

Batey, H., May, J., & Andrade, J. (2010). Negative Intrusive Thoughts and dissociation as Risk Factors for Self-Harm. *Suicide and Life-Threatening Behavior*, *40*(1), 35-49.

Blatt, S. J., D'Afflitti, J. P., & Quinlan, D. M. (1976). Experiences of depression in normal young adults. *Journal of Abnormal Psychology*, *85*, 383–389. doi: http://dx.doi.org/10.1037/0021-843X.85.4.383.

Borrill, J., Lorenz, E., & Abbasnejad, A. (2012). Using qualitative methods to explore non-disclosure: the example of self-injury. *International Journal of Qualitative Methods*, *11*(4), 384-398. doi: 10.1177/160940691201100406.

Burke, T. A., Hamilton, J. L., Abramson, L. Y., & Alloy, L. B. (2015). Non-suicidal self-injury prospectively predicts interpersonal stressful life events and depressive symptoms among adolescent girls. *Psychiatry Research*, *228*(3), 416-424. doi:10.1016/j.psychres.2015.06.021.

Carver, C. S., & Ganellen, R. J. (1983). Depression and components of self-punitiveness: high standards, self-criticism, and overgeneralization. *Journal of Abnormal Psychology*, *92*(3), 330. doi: http://dx.doi.org/10.1037/0021-843X.92.3.330.

Cawood, C. D., & Huprich, S. K. (2011). Late adolescent nonsuicidal self-injury: The roles of coping style, self-esteem, and personality pathology. *Journal of Personality Disorders*, *25*(6), 765. doi: http://dx.doi.org/10.1521/pedi.2011.25.6.765.

Chapman, A. L., Gratz, K. L., & Brown, M. Z. (2006). Solving the puzzle of deliberate self-harm: The experiential avoidance model. *Behaviour Research and Therapy*, *44*(3), 371-394. doi:10.1016/j.brat.2005.03.005.

Chung, J. M., Robins, R. W., Trzesniewski, K. H., Noftle, E. E., Roberts, B. W., & Widaman, K. F. (2014). Continuity and change in self-esteem during emerging adulthood. *Journal of Personality and Social Psychology*, *106*(3), 469. doi: http://dx.doi.org/10.1037/a0035135.

Christoffersen, M. N., Møhl, B., DePanfilis, D., & Vammen, K. S. (2015). Non-Suicidal Self-Injury—Does social support make a difference? An epidemiological investigation of a Danish national sample. *Child Abuse & Neglect*, *44*, 106-116. doi:10.1016/j.chiabu.2014.10.023.

Claes, L., Luyckx, K., Baetens, I., Van de Ven, M., & Witteman, C. (2015). Bullying and victimization, depressive mood, and non-suicidal self-injury in adolescents: the moderating role of parental support. *Journal of Child and Family Studies*, *24*(11), 3363-3371. doi: http://dx.doi.org/10.1007/s10826-015-0138-2.

Claes, L., & Vandereycken, W. (2007). The Self-Injury Questionnaire-Treatment Related (SIQ-TR): Construction, reliability, and validity in a sample of female eating disorder patients. In P. M. Goldfarb (Ed.), *Psychological tests and testing research trends* (pp. 111–139). New York, NY: Nova Science Publishers.

Clark, L. A. (1993). *Schedule for nonadaptive and adaptive personality (SNAP): Manual for administration, scoring, and interpretation*. Minneapolis, MN: University of Minnesota Press.

Cohen, J. N., Stange, J. P., Hamilton, J. L., Burke, T. A., Jenkins, A., Ong, M. L.,...Alloy, L. B. (2015). The interaction of affective states and cognitive vulnerabilities in the prediction of non-suicidal self-injury. *Cognition and Emotion*, *29*(3), 539-547. doi: 10.1080/02699931.2014.918872.

Cooper, J., Husain, N., Webb, R., Waheed, W., Kapur, N., Guthrie, E., & Appleby, L. (2006). Self-harm in the UK. *Social Psychiatry and Psychiatric Epidemiology*, *41*(10), 782-788. doi: 10.1192/bjp.bp.109.072637.

Davey, A., Arcelus, J., Meyer, C., & Bouman, W. P. (2015). Self-injury among trans individuals and matched controls: Prevalence and associated factors. *Health & Social Care in the Community*. doi: 10.1111/hsc.12239.

Deliberto, T. L., & Nock, M. K. (2008). An exploratory study of correlates, onset, and offset of non-suicidal self-injury. *Archives of Suicide Research*, *12*(3), 219-231. doi: 10.1080/13811110802101096.

Douglas, J., Cooper, J., Amos, T., Webb, R., Guthrie, E., & Appleby, L. (2004). "Near-fatal" deliberate self-harm: Characteristics, prevention and implications for the prevention of suicide. *Journal of Affective Disorders*, *79*(1), 263-268. doi: 10.1016/S0165-0327(02)00391-9.

Fazel, S., Geddes, J. R., & Kushel, M. (2014). The health of homeless people in high-income countries: Descriptive epidemiology, health consequences, and clinical and policy recommendations. *The Lancet*, *384*(9953), 1529-1540. doi: 10.1016/S0140-6736(14)61132-6.

Flett, G. L., Goldstein, A. L., Hewitt, P. L., & Wekerle, C. (2012). Predictors of deliberate self-harm behavior among emerging adolescents: An initial test of a self-punitiveness model. *Current Psychology, 31*(1), 49-64. doi: 10.1007/s12144-012-9130-9.

Franzoi, S. L., & Shields, S. A. (1984). The Body Esteem Scale: Multidimensional structure and sex differences in a college population. *Journal of Personality Assessment*, 48(2), 173–178. doi: http://dx.doi.org/10.1207/s15327752jpa4802_12.

García-Nieto, R., Carballo, J. J., Díaz de Neira Hernando, M., de León-Martinez, V., & Baca-García, E. (2015). Clinical correlates of non-suicidal self-injury (NSSI) in an outpatient sample of adolescents. *Archives of Suicide Research, 19*(2), 218-230. doi: 10.1080/13811118.2014.957447.

Garisch, J. A., & Wilson, M. S. (2015). Prevalence, correlates, and prospective predictors of non-suicidal self-injury among New Zealand adolescents: Cross-sectional and longitudinal survey data. *Child and Adolescent Psychiatry and Mental Health*, *9*(1), 1-11. doi: 10.1186/s13034-015-0055-6.

Garner, D. M., (1991). *The Eating Disorder Inventory 2*. Odessa, FL: Psychological Assessment Resources.

Gilbert, P., Clarke, M., Hempel, S., Miles, J. N. V., & Irons, C. (2004). Criticizing and reassuring oneself: An exploration of forms, styles and reasons in female students. *British Journal of Clinical Psychology*, *43*, 31–50. doi: 10.1348/014466504772812959.

Gilbert, P., McEwan, K., Irons, C., Bhundia, R., Christie, R., Broomhead, C., & Rockliff, H. (2010). Self-harm in a mixed clinical population: The roles of self-criticism, shame, and social rank. *British Journal of Clinical Psychology*, *49*(4), 563-576. doi: 10.1348/014466509X479771.

Glassman, L. H., Weierich, M. R., Hooley, J. M., Deliberto, T. L., & Nock, M. K. (2007). Child maltreatment, non-suicidal self-injury, and the mediating role of self-criticism. *Behaviour Research and Therapy, 45*(10), 2483-2490. doi: 10.1016/j.brat.2007.04.002.

Gooding, P., Tarrier, N., Dunn, G., Shaw, J., Awenat, Y., Ulph, F., & Pratt, D. (2015). The moderating effects of coping and self-esteem on the relationship between defeat, entrapment and suicidality in a sample of prisoners at high risk of suicide. *European Psychiatry*, *30*(8), 988-994. doi:10.1016/j.eurpsy.2015.09.002.

Goodson, P., Buhi, E. R., & Dunsmore, S. C. (2006). Self-esteem and adolescent sexual behaviors, attitudes, and intentions: A systematic review. *Journal of Adolescent Health*, *38*(3), 310-319. doi: 10.1016/j.jadohealth.2005.05.026.

Gratz, K. L. (2001). Measurement of deliberate self-harm: Preliminary data on the Deliberate Self-Harm Inventory. *Journal of Psychopathology and Behavioral Assessment*, *23*(4), 253-263.

Gratz, K. L. (2006). Risk factors for deliberate self-harm among female college students: the role and interaction of childhood maltreatment, emotional inexpressivity, and affect intensity/reactivity. *American Journal of Orthopsychiatry*, *76*(2), 238. doi: http://dx.doi.org/10.1037/0002-9432.76.2.238.

Hamza, C. A., Stewart, S. L., & Willoughby, T. (2012). Examining the link between nonsuicidal self-injury and suicidal behavior: A review of the literature and an integrated model. *Clinical Psychology Review*, *32*(6), 482-495. doi: 10.1016/j.cpr.2012.05.003.

Harrison, K. D. (2009). *Self injury among a college population: The role of attachment, self esteem, and emotional expression as risk factors* (Doctoral dissertation, Roosevelt University). Retrieved from http://gradworks.umi.com/33/87/3387831.html.

Höfler, M. (2005). Causal inference based on counterfactuals. *BMC Medical Research Methodology, 5*(1), 28. doi: 10.1186/1471-2288-5-28.

Hooley, J. M., & St. Germain, S. A. S. (2013). Nonsuicidal Self-Injury, Pain, and Self-Criticism: Does Changing Self-Worth Change Pain Endurance in People Who Engage in Self-Injury?. *Clinical Psychological Science*. Advance online publication. doi: 10.1177/2167702613509372.

Hooley, J. M., Ho, D. T., Slater, J., & Lockshin, A. (2010). Pain perception and nonsuicidal self-injury: A laboratory investigation. *Personality Disorders: Theory, Research, and Treatment, 1*(3), 170. doi: 10.1037/a0020106.

Hudd, S. S., Dumlao, J., Erdmann-Sager, D., Murray, D., Phan, E., Soukas, N., & Yokozuka, N. (2000). Stress at college: Effects on health habits, health status and self-esteem. *College Student Journal, 34*(2), 217-228. doi:

Jacobson, C. M., & Gould, M. (2007). The epidemiology and phenomenology of non-suicidal self-injurious behavior among adolescents: A critical review of the literature. *Archives of Suicide Research, 11*(2), 129-147. doi: 10.1080/13811110701247602.

Jenkins, A. L., & Schmitz, M. F. (2012). The roles of affect dysregulation and positive affect in non-suicidal self-injury. *Archives of Suicide Research, 16*(3), 212-225. doi: 10.1080/13811118.2012.695270.

Kaess, M., Parzer, P., Mattern, M., Plener, P. L., Bifulco, A., Resch, F., & Brunner, R. (2013). Adverse childhood experiences and their impact on frequency, severity, and the individual function of nonsuicidal self-injury in youth. *Psychiatry Research, 206*(2), 265-272. doi:10.1016/j.psychres.2012.10.012.

Kapur, N., Cooper, J., O'Connor, R. C., & Hawton, K. (2013). Non-suicidal self-injury v. attempted suicide: New diagnosis or false dichotomy?. *The British Journal of Psychiatry, 202*(5), 326-328. doi: 10.1192/bjp.bp.112.116111.

Kittila, A. K. (2012). *Emotion and nonsuicidal self-injury* (Doctoral Dissertation, Griffith University). Retrieved from https://www120.secure.griffith.edu.au/rch/file/5097ec1f-f668-04a8-7f5b-3bdaee02a1d9/1/Kittila_2013_02Thesis.pdf.

Klonsky, E. D. (2011). Non-suicidal self-injury in United States adults: Prevalence, sociodemographics, topography and functions. *Psychological Medicine*, *41*(09), 1981-1986. doi: http://dx.doi.org/10.1017/S0033291710002497.

Klonsky, E. D., & Glenn, C. R. (2009). Assessing the functions of non-suicidal self-injury: Psychometric properties of the Inventory of Statements About Self-injury (ISAS). *Journal of Psychopathology and Behavioral Assessment*, *31*(3), 215-219. doi: 10.1007/s10862-008-9107-z.

Laye-Gindhu, A., & Schonert-Reichl, K. A. (2005). Nonsuicidal self-harm among community adolescents: Understanding the "whats" and "whys" of self-harm. *Journal of Youth and Adolescence*, *34*(5), 447-457. doi: 10.1007/s10964-005-7262-z.

Leary, M. R. & Baumeister, R. F. (2000). The nature and function of self-esteem: Sociometer theory. In M. P. Zanna (Ed.), *Advances in experimental social psychology* (pp. 1-62). San Diego, CA: Academic Press.

Lloyd-Richardson, E. E., Perrine, N., Dierker, L., & Kelley, M. L. (2007). Characteristics and functions of non-suicidal self-injury in a community sample of adolescents. *Psychological Medicine*, *37*(08), 1183-1192. doi: http://dx.doi.org/10.1017/S003329170700027X.

Lovibond, P. F., & Lovibond, S. H. (1995). The structure of negative emotional states: Comparison of the Depression Anxiety Stress Scales (DASS) with the Beck Depression and Anxiety Inventories. *Behaviour Research and Therapy*, *33*(3), 335-343. doi: 10.1016/0005-7967(94)00075-U.

Lundh, L. G., Karim, J., & Quilisch, E. (2007). Deliberate self-harm in 15-yearold adolescents: A pilot study with a modified version of the deliberate selfharm inventory. *Scandinavian Journal of Psychology, 48,* 33–41. doi: 10.1111/j.1467-9450.2007.00567.x.

Mann, M. M., Hosman, C. M., Schaalma, H. P., & de Vries, N. K. (2004). Self-esteem in a broad-spectrum approach for mental health promotion. *Health Education Research*, *19*(4), 357-372. doi: 10.1093/her/cyg041.

Marshall, S. L., Parker, P. D., Ciarrochi, J., Sahdra, B., Jackson, C. J., & Heaven, P. C. (2015). Self-compassion protects against the negative effects of low self-esteem: A longitudinal study in a large adolescent sample. *Personality and Individual Differences*, *74*, 116-121. doi: doi:10.1016/j.paid.2014.09.013.

Moher, D., Liberati, A., Tetzlaff, J., & Altman, D. G. (2009). Preferred reporting items for systematic reviews and meta-analyses: the PRISMA statement. *Annals of Internal Medicine*, *151*(4), 264-269. doi:10.7326/0003-4819-151-4-200908180-00135.

Moran, P., Coffey, C., Romaniuk, H., Olsson, C., Borschmann, R., Carlin, J. B., & Patton, G. C. (2012). The natural history of self-harm from adolescence to young adulthood: A population-based cohort study. *The Lancet*, *379*(9812), 236-243. doi: 10.1016/S0140-6736(11)61141-0.

Muehlenkamp, J. J., Bagge, C. L., Tull, M. T., & Gratz, K. L. (2013). Body Regard as a Moderator of the Relation between Emotion Dysregulation and Nonsuicidal Self-Injury. *Suicide and Life-Threatening Behavior*, *43*(5), 479-493. doi: 10.1111/sltb.12032.

Muehlenkamp, J. J., Claes, L., Smits, D., Peat, C. M., & Vandereycken, W. (2011). Non-suicidal self-injury in eating disordered patients: A test of a conceptual model. *Psychiatry Research*, *188*(1), 102-108. doi: 10.1016/j.psychres.2010.12.023.

Muehlenkamp, J. J., & Gutierrez, P. M. (2007). Risk for suicide attempts among adolescents who engage in non-suicidal self-injury. *Archives of Suicide Research, 11*(1), 69-82. doi: 10.1080/13811110600992902.

Murray, S. L., Rose, P., Bellavia, G. M., Holmes, J. G., & Kusche, A. G. (2002). When rejection stings: how self-esteem constrains relationship-enhancement processes. *Journal of Personality and Social Psychology, 83*(3), 556. doi: http://dx.doi.org/10.1037/0022-3514.83.3.556.

Nelson, A. & Muehlenkamp, J. (2012). Body Attitudes and Objectification in Non-Suicidal Self-Injury: Comparing Males and Females. *Archives of Suicide Research, 16*(1), 1-12. doi: 10.1080/13811118.2012.640578.

Nock, M. K. (2009). Why do people hurt themselves? New insights into the nature and functions of self-injury. *Current Directions in Psychological Science, 18*(2), 78-83. doi: 10.1111/j.1467.

Nock, M. K. (2012). Future directions for the study of suicide and self-injury. *Journal of Clinical Child and Adolescent Psychology, 41*(2), 255-259. doi:10.1080/15374416.2012.652001.

Orth, U., Robins, R. W., & Roberts, B. W. (2008). Low self-esteem prospectively predicts depression in adolescence and young adulthood. *Journal of Personality and Social Psychology*, *95*(3), 695. doi: http://dx.doi.org/10.1037/0022-3514.95.3.695.

Overton, P. G., Markland, F. E., Taggart, H. S., Bagshaw, G. L., & Simpson, J. (2008). Self-disgust mediates the relationship between dysfunctional cognitions and depressive symptomatology. *Emotion, 8*(3), 379. doi: http://dx.doi.org/10.1037/1528-3542.8.3.379.

Pitts, M. K., Couch, M., Mulcare, H., Croy, S., & Mitchell, A. (2009). Transgender people in Australia and New Zealand: Health, well-being and access to health services. *Feminism & Psychology*, *19*(4), 475-495. doi: 10.1177/0959353509342771.

Plener, P. L., Schumacher, T. S., Munz, L. M., & Groschwitz, R. C. (2015). The longitudinal course of non-suicidal self-injury and deliberate self-harm: a systematic review of the literature. *Borderline Personality Disorder and Emotion Dysregulation*, *2*(1), 1. doi: 10.1186/s40479-014-0024-3.

Prinstein, M. J. (2008). Introduction to the special section on suicide and nonsuicidal self-injury: A review of unique challenges and important directions for self-injury science. *Journal of Consulting and Clinical Psychology, 76*(1), 1-8.

Probst, M., Vandereycken, W., Van Coppenolle, H., Vanderlinden, J., 1995. The body attitude test for patients with an eating disorder: Psychometric characteristics of a new questionnaire. *Eating Disorders, 3*, 133–144. doi: http://dx.doi.org/10.1080/10640269508249156.

Rosenberg, M. (1965). *Society and the adolescent self-image.* Princeton, NJ: Princeton University Press.

Rosenberg, M., Schooler, C., Schoenbach, C., & Rosenberg, F. (1995). Global self-esteem and specific self-esteem: Different concepts, different outcomes. *American Sociological Review*, 141-156. doi: http://dx.doi.org/10.2307/2096350.

Sansone, R. A., Wiederman, M. W., & Sansone, L. A. (1998). The Self-Harm Inventory (SHI): development of a scale for identifying self-destructive behaviors and borderline personality disorder. *Journal of Clinical Psychology, 54*(7), 973-983. doi: http://dx.doi.org/10.1002/(SICI)1097-4679(199811)54:7%3C973::AID-JCLP11%3E3.0.CO;2-H.

Schoenleber, M., Berenbaum, H., & Motl, R. (2014). Shame-related functions of and motivations for self-injurious behavior. *Personality Disorders: Theory, Research, and Treatment*, *5*(2), 204. doi: http://dx.doi.org/10.1037/per0000035.

Seals, D., & Young, J. (2003). Bullying and victimization: Prevalence and relationship to gender, grade level, ethnicity, self-esteem, and depression. *Adolescence*, *38*(152), 735-747. doi:

Smith, N. B., Steele, A. M., Weitzman, M. L., Trueba, A. F., & Meuret, A. E. (2015). Investigating the Role of Self-Disgust in Nonsuicidal Self-Injury. *Archives of Suicide Research*, *19*(1), 60-74. doi: 10.1080/13811118.2013.850135.

Sowislo, J. F., & Orth, U. (2013). Does low self-esteem predict depression and anxiety? A meta-analysis of longitudinal studies. *Psychological Bulletin*, *139*(1), 213. doi: http://dx.doi.org/10.1037/a0028931.

St. Germain, S. A. S., & Hooley, J. M. (2012). Direct and indirect forms of non-suicidal self-injury: Evidence for a distinction. *Psychiatry Research*, *197*(1), 78-84. doi:10.1016/j.psychres.2011.12.050.

Stroehmer, R., Edel, M. A., Pott, S., Juckel, G., & Haussleiter, I. S. (2015). Digital comparison of healthy young adults and borderline patients engaged in non-suicidal self-injury. *Annals of General Psychiatry*, *14*(1), 1-9. doi: 10.1186/s12991-015-0088-5.

Swannell, S. V., Martin, G. E., Page, A., Hasking, P., & St John, N. J. (2014). Prevalence of nonsuicidal self-injury in nonclinical samples: Systematic review, meta-analysis and meta-regression. *Suicide and Life-Threatening Behavior*, *44*(3), 273-303. doi: 10.1111/sltb.12070.

Tanner, A. K., Hasking, P., & Martin, G. (2014). Effects of rumination and optimism on the relationship between psychological distress and non-suicidal self-injury. *Prevention Science, 15*(6), 860-868. doi: 10.1007/s11121-013-0444-0.

Taylor, P. J., Hutton, P., & Wood, L. (2015). Are people at risk of psychosis also at risk of suicide and self-harm? A systematic review and meta-analysis. *Psychological Medicine, 45*(05), 911-926. doi: http://dx.doi.org/10.1017/S0033291714002074.

Taylor, A. W., Martin, G., Dal Grande, E., Swannell, S., Fullerton, S., Hazell, P., & Harrison, J. E. (2011). Methodological issues associated with collecting sensitive information over the telephone-experience from an Australian non-suicidal self-injury (NSSI) prevalence study. *BMC Medical Research Methodology, 11*(1), 1. doi: 10.1186/1471-2288-11-20.

Trepal, H. C., Wester, K. L., & Merchant, E. (2015). A cross-sectional matched sample study of nonsuicidal self-injury among young adults: support for interpersonal and intrapersonal factors, with implications for coping strategies. *Child and Adolescent Psychiatry and Mental Health, 9*(1), 1-10. doi: 10.1186/s13034-015-0070-7.

Unger, J. B., Kipke, M. D., Simon, T. R., Montgomery, S. B., & Johnson, C. J. (1997). Homeless youths and young adults in Los Angeles: Prevalence of mental health problems and the relationship between mental health and substance abuse disorders. *American Journal of Community Psychology, 25*(3), 371-394. doi: 10.1023/A:1024680727864.

Van Strien, T., Owens, M. (2003). Validation of the Dutch EDI-2 in one clinical and two nonclinical populations. *European Journal of Psychological Assessment, 19*, 66–84. doi: http://dx.doi.org/10.1027//1015-5759.19.1.66.

Victor, S. E., & Klonsky, E. D. (2014). Daily Emotion in Non-Suicidal Self-Injury. *Journal of Clinical Psychology, 70*(4), 364-375. doi:10.1016/j.cpr.2014.03.005.

Waite, P., McManus, F., & Shafran, R. (2012). Cognitive behaviour therapy for low self-esteem: A preliminary randomized controlled trial in a primary care setting. *Journal of Behavior Therapy and Experimental Psychiatry*, *43*(4), 1049-1057. doi:10.1016/j.jbtep.2012.04.006.

Walsh, B. W. (1999). *The Body Attitudes Scale*. Unpublished manuscript.

Whitlock, J., Muehlenkamp, J., Purington, A., Eckenrode, J., Barreira, P., Baral Abrams, G.,… Knox, K. (2011). Nonsuicidal self-injury in a college population: General trends and sex differences. *Journal of American College Health*, *59*(8), 691-698. doi: 10.1080/07448481.2010.529626.

Williams J. W, Plassman B. L., Burke J., Holsinger T., Benjamin S. (2010). *Preventing Alzheimer's Disease and Cognitive Decline* (Report No. 193). Rockville, MD: Agency for Healthcare Research and Quality. Retrieved from http://www.ncbi.nlm.nih.gov/books/NBK47456/.

Zaki, L. F., Coifman, K. G., Rafaeli, E., Berenson, K. R., & Downey, G. (2013). Emotion differentiation as a protective factor against nonsuicidal self-injury in borderline personality disorder. *Behavior therapy*, *44*(3), 529-540. doi: 10.1016/j.beth.2013.04.008.

Zetterqvist, M. (2015). The DSM-5 diagnosis of nonsuicidal self-injury disorder: A review of the empirical literature. *Child and Adolescent Psychiatry and Mental Health*, *9*(1), 1-13. doi: 10.1186/s13034-015-0062-7.

Zetterqvist, M., Lundh, L. G., Dahlström, Ö., & Svedin, C. G. (2013). Prevalence and function of non-suicidal self-injury (NSSI) in a community sample of adolescents, using suggested DSM-5 criteria for a potential NSSI disorder. *Journal of Abnormal Child Psychology*, *41*(5), 759-773. doi: 10.1007/s10802-013-9712-5.

Chapter 2: Empirical Research

Exploring the Roles of Negative Self-perceptions in Recovery from Self-harm[1]

[1]To be submitted to the Archives of Suicide Research (articles limited to 6000 words; Appendix C).

Abstract

Objectives: Understanding the psychological processes involved in self-harm is important in supporting recovery. Negative self-perceptions may hinder a person's path to recovery. Therefore, this study seeks to examine the influences of these self-perceptions.

Methods: Ninety-eight participants with a history of self-harm took part in this study. Participants completed an interview with researchers where they completed questionnaires and a Repertory Grid to assess self-perceptions in relation to 'self' and 'others'.

Results: Participants with more positive self-perceptions demonstrated greater levels of recovery across a number of domains.

Conclusion: This study has highlighted that self-perceptions are important constructs to consider when working with someone who is self-harming and may support both assessment and treatment outcomes.

Keywords: Self-harm, recovery, self-perception, Repertory Grids

Introduction

Self-harm (SH) is a major public health concern (O'Connor, Ramussen & Hawton, 2012) affecting around 4 in every 1,000 people in the United Kingdom each year (Winter, Sireling, Riley et al., 2007). The term 'self-harm' includes acts of deliberate self-injury or self-poisoning (Hawton et al., 2015) occurring with or without suicidal intent (Klonsky, Oltmanns & Turkheimer, 2003), or with ambivalence surrounding the intent (Chapman, Gratz, & Brown, 2005). Although many individuals who engage in SH do not have a psychiatric diagnosis (Kerr, Muehlenkamp & Turner, 2010), such behaviors may occur alongside problems such as depression and anxiety (Klonsky et al., 2003), eating disorders (Sansone & Levitt, 2004) and borderline personality disorder (BPD; for which SH is a diagnostic criterion; Skodol, Bender, Morey et al., 2011). Furthermore, previous SH is the strongest predictor in completed suicide (Hawton & Van Heeringen, 2009).

Several studies have sought to better understand the functions of SH behaviors, which have included a means of escape from unbearable pain (Williams, 2001) and to reinforce positive or negative stimuli (Nock & Pristein, 2004). These have informed the development of a number of psychosocial interventions aimed at improving emotional regulation, such as Dialectical Behavior Therapy (DBT; Linehan, Schmidt, Dimeff et al., 1999) and Mentalization-based Therapy (MBT; Bateman & Fonagy, 2006). In addition, targeted training has also shown to be beneficial for staff working with clients who SH in promoting more positive therapeutic engagements and outcomes (Hazelton, Rossiter & Milner, 2005). Despite advances in knowledge, there remains a dearth of research which seeks to understand the mechanisms associated with recovery from SH. For example, a recent Cochrane review of psychosocial interventions for SH indicated that although interventions such as DBT and MBT indicated some reductions in SH frequency, the current evidence base could not provide clear evidence of improvements to SH recovery (Hawton, Witt, Taylor-Salisbury et al.,

2016). It may not be surprising, therefore, that clinicians have cited a lack of confidence when working with those who SH (Hadfield, Brown, Pembroke et al., 2009). In addition, there has been criticism of mainstream services responses to SH due to a distinct focus on SH cessation without an idiosyncratic understanding of what the behavior was attempting to communicate (Simpson, 2006). This is particularly pertinent as SH cessation alone has been shown to be an unreliable indicator of psychological wellbeing (Shaw, 2006). A recent qualitative study by Wills (2012) supported this suggestion, concluding that SH recovery was a 'multidimensional concept' which went beyond SH cessation to include a number of intra- and interpersonal factors. This included: a greater sense of self-worth, feeling in control of their self-harm, social support and inclusion. Therefore, SH recovery is likely to involve factors beyond a reduction in SH behaviors. The current study focuses on one important putative determinant of perceived recovery in those who engage in SH, namely self-perceptions.

Self-perceptions in Self-harm

The way in which individuals who SH perceive themselves, and mentally position themselves relative to others, appears important in understanding their subsequent experiences of recovery (Brown, Moss, McGrouther et al., 2010). SH is highly stigmatized (Law, Rostill-Brookes & Goodman, 2009) and so is likely to affect self-perceptions in those who SH (Wood, 2011). Research has supported a relationship between how individuals perceive themselves, and others, and an engagement in SH behaviors (Adams, Rodham & Gavin, 2005). Self-perceptions are also inherent in certain reported motives for SH including 'self-punishment' and 'defining the self' (Edmonson, Brennan & House, 2016). Moreover, related variables such as negative social comparisons and striving for perfectionism appear to be related to suicidal thoughts and attempts (Wetherall, Daly, Robb et al., 2015; O'Connor, 2007) and low self-esteem is also related to both the presence and frequency of SH

(Muehlenkamp, Erelt, Miller et al., 2011). Therefore, it may be important to understand more about how a person construes the Self in relation to their SH and how it may impact upon a person's perception of recovery.

Self-perception has been understood as a multi-dimensional construct (Himmelstein & Tomiyama, 2015; Smith, Lynch & Stephens, 2015). It is possible to envision a person having multiple perceived selves (e.g., self as employee, self as parent, self as researcher) including, for those who SH, a self-harming self. For example, research has suggested a distinction between a hidden self (the 'self-harmer') versus a presented self (effectively the 'non-self-harmer') in those who SH (Ogden & Bennett, 2015). These aspects of self are likely construed relative to mental representations of others (e.g., other self-harmers, others who do not SH; Burr, Giliberto & Butt, 2014).

The congruence (or distance) between various representations of self and other may have implications for perceived recovery amongst those who SH. For example, a 'self-self' distance between an 'ideal self' (the person one would like to be) and 'current self' (the person one is) could be seen as consistent with self-discrepancy theory (SDT; Higgins, 1987). SDT posits that those with more congruent beliefs surrounding domains of self, namely 'actual' and 'ideal', are less likely to suffer mental distress. Indeed, in the case of SH, identity instability has been hypothesized as perpetuating near-fatal SH (Claes, Luyckx & Bijttebier, 2014). Therefore, those with more congruent 'current' and 'ideal' selves may be more likely to consider themselves 'recovered' (Shea, 2010).

Social identity theory (SIT; Hogg & Abrams, 1988) may also help in understanding SH recovery. SIT posits that one's affinity to a group will influence how an individual behaves in accordance with the group's norms (Hogg, 2006). Indeed, what a group believes and how they act has been shown to be highly influential in a person's intention to engage in SH (O'Connor, Armitage & Gray, 2010). In addition, there has been evidence to suggest that

there may be negative consequences to engaging with SH groups online including: worsening distress for those who SH (Daine, Hawton, Singaravelu et al., 2013) and theories regarding social contagion (Jarvi, Jackson, Swenson et al., 2013). Therefore, there may be three important self-perceptions to consider. First, it may be important to consider the influence of the 'current self' compared to an identity of being a 'self-harmer'. Here, a greater discrepancy between how the person sees themselves and how they perceive their 'self-harming self', may positively influence recovery. Second, a 'self-other' perception such as a greater distance between the 'current self' and 'others who SH' may influence a person's sense of recovery. For example, should someone strongly identify with others who SH (a small self-others who SH distance) then this may impair perceptions of recovery (Jarvi et al., 2013). Finally, it may be important to consider where a person places themselves compared to others in society. For example, perceived social inequality has been shown to negatively impact upon both physical and mental health (MH) outcomes (Sakurai, Kawakami, Yamaoka, et al., 2010) and may inform both self-perceptions and contribute to risk of suicide attempts (Wetherall et al., 2015). Therefore, this study sought to examine these factors in relation to perceptions of recovery.

Recovery as a Multidimensional Concept

Recovery has been explained as a multidimensional concept that may include different factors for different people (Roe, 2001). Importantly, a person's own perception of their recovery has been identified as paramount (Beck, Heffernan, Law et al., 2012). Indeed, clinician-rated measures of psychosocial functioning have found to be unrelated to patient-rated recovery outcomes (Lavin & Ryan, 2012). There remains a paucity of literature on what determines a person's path to SH recovery (Wadman, Clarke, Sayal et al., 2016). Therefore, this study sought to address this through examination of a person's own perception of their SH recovery. In addition, a standardized recovery measurement was selected due to its

factors aligning with potentially important processes in SH recovery, such as: help seeking (Whitlock, Russien & Pietrusza, 2015), hopefulness (Taliaferro & Muehlenkamp, 2014) and goal-orientation (Emery, Heath & Mills, 2016).

Current Study

Previous literature has largely relied on qualitative analysis or questionnaire measures to assess self-perceptions (e.g., Harter's Self-Perception Profile for Adults; Messer & Harter, 2012). However, Repertory Grids, a methodology emerging from Personal Construct Theory (PCT; Kelly, 1955), provided a means of enabling a more in-depth and idiographic analysis of how an individual views themselves and the others in their lives (Fransella, Bell & Bannister, 2004). Repertory Grids contain representations of self and others, known as 'elements' (e.g. 'my current self', 'my ideal self', 'my friends') which are described in terms of polarized 'constructs' (e.g. cruel versus kind; weak versus strong). Each element can then be seen as similar or different to one another, based on the constructs' ratings. Repertory Grid technique has been successfully used with those who SH both in clinical practice (Winter et al., 2007) and in empirical research (Padoa, 2008) and was selected as a method of gaining rich quantitative information that was particularly suited to explore self-perceptions (Fransella et al., 2004).

Considering the potential importance of self-perceptions in SH, it was expected that how an individual construes themselves and others would be an important determinant to explore in relation to recovery. It was also understood that routine assessments in clinical practice may not capture the multidimensional nature of the SH recovery process (Simpson, 2006). Thus, self-perceptions may be more valuable clinically in determining where a client is in terms of their SH recovery and what work may be helpful to support them towards where they would like to be.

The primary aim of the study was to demonstrate how repertory grid derived self-perceptions and social comparison scales are predictive of various domains of recovery in SH. I hypothesized the following:

1. SH recovery is associated with a greater perceived distance between current self and:
    a) The self-harming self on repertory grid constructs.
    b) Self-harming others on repertory grid constructs.
2. SH recovery is associated with less self-discrepancy, characterized by a smaller perceived distance between current self and ideal self on repertory grid constructs.
3. SH recovery is associated with higher subjective social status. This is operationalized through higher self-ranking compared to others on social comparison scales.

Methods

Participants

Participants were adults with a history of SH in the North West of England. Recruitment was based on a convenience sampling method. As those who have engaged in SH are described as a heterogeneous group (Gelinas & Wright, 2013), recruitment was carried out from a number of sources: local SH support groups; community MH teams; student health services; social media; local jobs websites; and local MH support websites. The study poster is included in Appendix D. Inclusion criteria for the study were: 1) aged 18 years or more; 2) two or more lifetime incidences of SH (to ensure exclusion of individuals for whom SH was a single, uncharacteristic act); 3) English-language ability to understand the researcher and complete study materials. Participants were excluded if they were judged to be at high or immediate risk of harm to themselves. This was operationalized through the Risk Protocol (Appendix E).

Procedure

Participants responded to adverts via email or through sharing their details with their named clinician. They were then contacted via telephone by a researcher and underwent an eligibility screening which included the Risk Protocol (Appendix F).

Eligible participants were then invited to attend for an interview with a researcher. Informed consent was gained from all participants and study information was given to participants before undertaking the interview (Appendix G). Questionnaires and the Repertory Grid were administered by a researcher (Appendix H). The interview lasted 45 to 120 minutes per participant. The order of questionnaires was randomized to reduce the impact of an order-effect. The study was undertaken with full ethical approval. An additional outline of the data collection method and ethical approval documents can be found in Appendix I.

Measures

Demographic and clinical information. This included information on participants' age, gender, ethnicity, employment status, whether they considered themselves to have a MH diagnosis, if they were accessing MH services and if they were taking any psychiatric medication.

Perceived Recovery from SH (PR-SH). To the author's knowledge, there was no existing measure on perceived recovery from SH. Therefore, this was determined through a single question: "On a scale of 0 – 10, where do you currently feel you are in terms of your recovery from self-harm?" There were anchor point descriptors at each extreme: 'not at all recovered from my self-harm' (point 0); and 'completely recovered from my self-harm' (point 10).

Recovery Assessment Scale (RAS-22; Corrigan, Giffort, Rashid et al., 1999). This was a 22-item item self-report measure and questions were answered via a 5-point Likert

scale that examined five factors of recovery: personal confidence and hope; willingness to ask for help; goal and success orientation; reliance on others and; not being dominated by symptoms. Previous studies have shown the five factor structure to be supported (Corrigan, Salzer, Ralph et al., 2004) and good reliability and validity has been demonstrated for this model (Salzer & Brusilovskiy, 2014). The internal consistencies for factors in this sample are: personal confidence and hope (Cronbach's α=.83); willingness to ask for help (Cronbach's α=.89); goal and success orientation (Cronbach's α=.77); reliance on others (Cronbach's α=.73) and; not being dominated by symptoms (Cronbach's α=.84).

Personality Structure Questionnaire (PSQ; Pollock, Broadbent, Clarke et al., 2001). The PSQ was an eight item self-report questionnaire which assessed personality stability. This questionnaire was used to consider the potential influence of personality integration on recovery from SH as this can be a key outcome in specialized treatments for reducing SH, such as DBT (Klonsky & Muehlenkamp, 2007). Items were rated on 5-point Likert scales with polarized statements at each end around the variability felt in distinct states of mind (Pollock et al. 2001). It has demonstrated good reliability and validity within clinical samples and has been identified as a useful assessment of personality integration (Bedford, Davies & Tibbles, 2009) and as a recovery tool (Clarke, Thomas & James, 2013) so was considered a valid measure to use with this sample. The PSQ demonstrated good internal consistency for this sample (Cronbach's α=.81).

Repertory Grid technique (Kelly, 1955). This was employed to measure participants' construing (or the meanings and interpretations one ascribes) in relation to self and others. Participants were provided with a set of pre-determined (supplied) elements which represented various aspects of self and others (n=8). These were rated against a set of pre-determined constructs (n=15). Elements and constructs within the grid were created through three methods: using themes from previous SH studies that used repertory grid

methodology (Parker, 1981; Winter et al., 2007); drawing from qualitative literature on SH recovery (Wills, 2012); and undertaking consultations with two people who engaged in SH (a summary of the consultations can be found in Appendix J). The ratings of each construct for each element was conducted through a 7-point Likert scale numbered (1 and 7 representing the extreme poles of the construct). Providing pre-determined constructs and elements to participants has been shown to be a timely way to administer repertory grids (Paget & Ellett, 2014) and was necessary to enable valid, direct comparisons and statistical analysis between multiple participants' grids (Edwards, McDonald & Young, 2009). As repertory grids produce a large amount of data it was beyond the scope of this paper to include all elements and did not pertain to the study hypotheses. Therefore, four elements were used to fulfil the aims of this study. The final elements and poles of each construct are presented in Table 3.

Table 3

Repertory Grid Constructs and Elements Developed for the Study

Elements
Me as I am
Me as I'd like to be
Me when I self-harm/self-harmed
Others who SH
Constructs
Hides feeling - Expresses feelings
Finding things hard - Finding things easy
Not recovered or far from recovery - Recovered or Recovering
Not true to self - Accepting of self
Ill/unwell – Healthy
Impulsive and desperate - Sensible and plans ahead
Shameful – Proud
Looked down on - Looked up to
Not accepting of others - Accepting of others
Disempowered and invalidated - Empowered and validated
Unable to cope with challenges - Able to cope or coping

Uncared for - Cared for
Undeserving – Deserving
Not listened to - Listened to
Blame myself for things - Blame my situation or experiences for things

Note. Each construct is rated from 1 (left-hand pole of construct) to 7 (right-hand pole of construct) for each element, in turn.

Social Comparison Scales (SCS). This involved three self-anchoring scales (Cantril, 1965) which have been widely used and validated within health and social research (Atkinson, 1982). They were used in the form of 10-rung ladders which represented where people stand in society. The first two ladders reflected where participants felt they stood in their own community and in the UK, whilst the 3rd assessed where the participant believed others would place them on the ladder. The top rung of the ladders represented those with the highest standing and the bottom rung represented those with the lowest standing. The meaning made of 'highest' and 'lowest' was determined by the participant, with additional guidance given (e.g., "'highest represents those who are best off – those with most money, most education and most respected jobs; 'lowest' represents people who are worst off – those with the least money, least education and least respected jobs"). Instructions for its use have been adapted from a previous study (Singh-Manoux, Adler & Marmot, 2003). A total score was created by summing scores across the three scales. The total score demonstrated good internal reliability (Cronbach's α=.83).

Self-Injurious Thoughts and Behavior Interview- Short Form (SITBI-SF; Nock, Holmberg, Photos et al., 2007). The SITBI- SF is a 72-item self-report questionnaire which assessed the presence, frequency and severity of a variety of SH thoughts and behaviors, including suicidal ideation and suicide attempts. The SITBI has been demonstrated to have good validity and reliability with adult populations (Borschmann, Hogg, Philips, et al., 2012). From this interview, sub-sections related to suicide attempt and non-suicidal self-injury were

used for this study and a variable concerning how recently a person engaged in SH (SH in the past year versus more historic SH) was created. The use of relevant sections of the SITBI has been advocated when working with those who SH (Muehlenkamp, 2012).

Data Analysis

Repertory Grid scores were transformed into distances between elements via online software (http://www.psyctc.org/grids/ingrid1.html). Key distances extracted from the grid were: a) current self and ideal self (current v ideal; where a shorter distance indicated greater recovery); b) current self and self-harming self (current v me SH; where a greater distance indicated greater recovery); c) current self and others who SH (current v other SH; where a greater distance indicated greater recovery). Bivariate correlations were initially undertaken to examine associations between key variables. Multiple linear regression analyses were subsequently conducted to examine the associations between self-perception variables and indices of recovery. Outcome variables were the five subscales from the RAS alongside the PR-SH. In each model, the following covariates were also included: recency of SH; presence of a MH diagnosis; and PSQ scores. A power analysis was undertaken using G*power 3.1.3 (Faul, Erdfelder, Lang et al., 2007). Assuming six predictors, $\alpha = .05$, $\beta = .80$ and $f^2 = .15$ (medium effect size), a sample size of $n = 98$ was required to detect an effect of that size.

Results

Sample Characteristics

Descriptive statistics for study variables are found in Table 4. Pearson's correlations were used for normally distributed variables (PR-SH, SCS, PSQ, 'current vs ideal', 'current vs me SH' and 'current v other SH') and Spearman's correlations were used for variables that were not normally distributed and did not meet parametric assumptions. These were the RAS sub-scales (personal confidence and hope, willingness to ask for help, goal and success

orientation, reliance on others, not dominated by symptoms). Results are summarized in Table 5.

Variable	N=98	%
Age		
18-29	88	89.8
30-49	10	10.2
Gender		
Female	85	86.7
Male	10	10.2
Other	3	3.1
Ethnicity		
White	89	90.8
Other (Asian, Black, Chinese, Arab)	5	5.0
Mixed	4	4.1
Accessing MH Services	37	37.8
Taking Psychiatric Medication	40	40.8
Diagnosed with one (or more) MH Difficulty	56	57.1
SH in Past Year	53	54.1

Note. MH, Mental Health; SH, Self-harm.

Table 4

Demographic Characteristics of Sample

The Influences of Self-perceptions in Predicting Self-harm Recovery

Six multiple linear regression analyses were conducted to examine the association between self-perceptions (‘current v ideal’; ‘current v me SH’; ‘current v other SH’ and the SCS) and the six different recovery outcomes (PR-SH; ‘personal confidence and hope’; ‘willingness to ask for help’; ‘goal and success orientation’; ‘reliance on others’ and ‘not dominated by symptoms’), while controlling for several covariates (recency of SH, the presence of a MH difficulty, the influence of personality integration). Regression residuals were heteroscedastic and non-normal. There were no highly influential cases as

operationalized through examination of standardized residuals and tests for collinearity indicated that multicollinearity was not a concern. The bar charts and figures related to these factors are reported in Appendix K. To improve the robustness of analyses, bias-corrected and accelerated bootstrapped confidence intervals (*CI*) were generated for regression coefficients, with 5,000 resamples. The regression analyses for each recovery outcome were conducted in two steps. Covariates alone were placed into a first model and self-perception variables were included in a second, full model.

The initial covariate model provided the following increases in R^2 from zero: PR-SH resulted in ($F(3, 94) = 21.56$, $p<0.01$, $\Delta R^2 = .41$); 'personal confidence and hope' resulted in ($F(3, 94) = 16.84$, $p<0.01$; $\Delta R^2 = .35$); 'willingness to ask for help' resulted in ($F(3, 94) = 2.72$, $p<0.05$; $\Delta R^2 = .08$); 'goal and success orientation' resulted in ($F(7, 90) = 6.65$, $p<0.01$, , $\Delta R^2 = .18$); 'reliance on others' resulted in ($F(7, 90) = 1.84$, p=n.s., $\Delta R^2 = .06$); and 'not dominated by symptoms' resulted in ($F(7, 90) = 10.82$, $p<0.01$, $\Delta R^2 = .26$). The full model provided the following increases in R^2: PR-SH resulted in ($F(7, 90) = 14.56$, $p<0.01$, $\Delta R^2 = .12$); 'personal confidence and hope' resulted in ($F(7, 90) = 18.68$, $p<0.01$, $\Delta R^2 = .24$); 'willingness to ask for help' resulted in ($F(7, 90) = 4.25$, $p<0.01$, $\Delta R^2 = .16$); 'goal and success orientation' resulted in ($F(7, 90) = 9.43$, $p<0.01$, $\Delta R^2 = .25$); 'reliance on others' resulted in ($F(7, 90) = 2.32$, $p<0.05$, $\Delta R^2 = .12$); and 'not dominated by symptoms' resulted in ($F(7, 90) = 8.96$, $p<0.01$, $\Delta R^2 = .15$). The regression coefficients and associated bootstrapped *CI* for all variables are summarized in Table 6.

SH recovery and self-harming self. A larger distance (greater incongruence) between 'current v me SH' appraisals was able to explain variance in 'willingness to ask for help' (β=.34, $p<0.05$). Therefore, hypothesis 1a was supported.

SH recovery and self-harming others. A larger distance (greater incongruence) between 'current v other SH' appraisals was not able to explain recovery in any domains. Therefore, hypothesis 1b was not supported.

SH recovery and ideal self. A smaller distance (greater congruence) between 'current v ideal' appraisals were able to significantly explain improved recovery across three domains: PR-SH (β=-.32, p<0.05), personal confidence and hope (β=-.39, p<0.01) and willingness to ask for help (β=-.3, p<0.05). Therefore, hypothesis 2 was supported.

SH recovery and subjective social status. Higher scores on the SCS were able to explain improved recovery in one domain of recovery, 'goal and success orientation' (β=.21, p<0.05). Therefore, hypothesis 3 was supported.

SH recovery and study covariates. Covariates were also able to explain variance in recovery scores: how recently someone engaged in SH was able to predict variance in PR-SH scores (β=-.34, p<0.01), and being diagnosed with a MH difficulty predicted variance in two scales: willingness to ask for help (β=.28, p<0.01); and not dominated by symptoms (β=-.3, p<0.01).

Table 5

Correlations of Study Variables

	PR-SH	SCS	Current v ideal	Current v me SH	Current v other SH	PSQ	Mean	*SD*
PR-SH							6.95	2.1
SCS	.28*						14.1	4.95
Current v ideal	-.59*	-.50*					9.21	3.05
Current v me SH	.43*	.31*	-.54*				10.2	2.81
Current v other SH	.51*	.33*	-.51*	.72*			9.93	3.12
PSQ	-.49*	-.15	.50*	-.37*	-.37*		28.1	6.02
RAS								
Personal confidence and hope	.54**	.47**	-.70**	.56**	.49**	-.49**	22.9	4.99
Willingness to ask for help	.30**	0.07	-.30**	.32**	0.19	-.15	9.94	3.25
Goal and success orientation	.46**	.46*	-.47*	.56*	.57*	-.30*	19.8	3.19
Reliance on others	.33**	.23*	-.25*	.25*	.37**	-.13	16	2.85
Not dominated by symptoms	.53**	.29**	-.51**	.49**	.52**	-.36**	9.99	3.03

Note: PR-SH, Perceived recovery from self-harm; RAS, Recovery Assessment Scale; SCS, Social Comparison Scales; PSQ, Personality Structure Questionnaire; current v ideal, current self-versus-ideal self; current v me SH, current self-versus-self-harming self; Current v other SH, current self-versus-other self-harmers; *p < .05; **p < 0.01.

Table 6

Regression Coefficients and Bootstrapped 95% CI for Variables in the Analysis

	PR-SH					Personal confidence and hope					Willingness to ask for help				
	B	Bootstrap 95% CI		β	r_{sp}	B	Bootstrap 95% CI		β	r_{sp}	B	Bootstrap 95% CI		β	r_{sp}
		Lower	Higher				Lower	Upper				Lower	Upper		
Predictors															
Current v ideal	-.22	-.39	-.05	**-32***	-.22	-.64	-.99	-.24	**-.39****	-.27	-.32	-.55	-.04	**-.30***	-.21
Current v me SH	-.06	-.10	.28	.08	.05	.20	-.35	.90	.11	.07	.39	.04	.65	**.34***	.22
Current v other SH	.07	-.07	.21	.11	.07	.03	-.34	.38	.02	.01	-.09	-.39	.32	-.09	-.06
SCS	-.02	-.09	.05	-.05	-.04	.17	.01	.37	.17	.14	-.09	-.22	.05	-.14	-.12
Covariates															
Recency of SH	-1.65	-2.14	-.65	**-.34****	-.28	-1.02	-2.65	.62	-.10	-.09	-1.02	-2.39	.47	-.16	-.13
MH Diagnosis	-.65	-1.02	.19	-.09	-.08	-1.23	-2.81	.45	-.12	-.11	1.78	-.16	2.64	**.28****	.25
PSQ Total	-.10	-.10	.04	-.10	-.08	-.14	-.32	.02	-.17	-.14	.02	-.12	.16	.04	.03

Note: SH self-harm; current v ideal, current self-versus-ideal self; current v me SH, current self-versus-self-harming self; Current v other SH, current self-versus-other self-harmers SCS Social Comparison Scales; MH Mental Health; PSQ Personality Structure Questionnaire; r_{sp} semi-partial correlation;*p < .05; **p < 0.01.

Table 6 (continued)

Regression Coefficients and Bootstrapped 95% CI for Variables in the Analysis

	Goal and success orientation					Reliance on others					Not-dominated by symptoms				
	B	Bootstrap 95% CI		β	r_{sp}	B	Bootstrap 95% CI		β	r_{sp}	B	Bootstrap 95% CI		β	r_{sp}
		Lower	Higher				Lower	Upper				Lower	Upper		
Predictors															
Current v ideal	-.17	-.43	.05	-.16	-.11	-.17	-.43	.15	-.18	-.13	-.22	-.49	.01	-.22	-.15
Current v me SH	.28	.03	.65	.25	.16	-.06	-.33	.32	-.06	-.04	.1	-.21	.52	.09	.06
Current v other SH	.12	-.16	.35	.12	.07	.22	-.08	.47	.24	.15	.24	-.01	.46	.24	.15
SCS	.13	.03	.24	**.21***	.18	.05	-.08	.19	.08	.07	-.01	-.13	.11	-.02	-.01
Covariates															
Recency of SH	-.13	-1.3	1.03	-.02	-.02	-.67	-1.82	.48	-.12	-.10	-.04	-1.13	1.09	-.01	-.01
MH Diagnosis	-.85	-1.91	.22	-.13	-.12	.18	-.86	1.15	.03	.03	-1.85	-2.87	-.83	**-.30****	-.28
PSQ Total	-.03	-.14	.09	-.05	-.04	.05	-.07	.16	.10	.08	-.01	-.11	.10	-.01	-.01

Note: SH self-harm; current v ideal, current self-versus-ideal self; current v me SH, current self-versus-self-harming self; Current v other SH, current self-versus-other self-harmers SCS Social Comparison Scales; MH Mental Health; PSQ Personality Structure Questionnaire; r_{sp} semi-partial correlation;*p < .05; **p < 0.01.

Discussion

The aim of this study was to examine the association between self-perceptions and SH recovery. Individuals who demonstrated a smaller distance between current and ideal selves, were more likely to perceive themselves as more recovered from SH, had greater personal confidence and hope, and were more willing to ask for help. These findings support the theoretical model of self-discrepancy (SDT; Higgins, 1987) in which it is hypothesized that those with greater congruence between perceived 'actual' and 'ideal' selves demonstrate less mental distress. This is an important finding as it adds to literature demonstrating congruence in self as an important indicator of recovery in other presentations, such as psychosis (Connell, Schweitzer & King, 2015). For those who SH, current-ideal congruence may be particularly important as factors such as striving for perfectionism and self-criticism (which may increase current-ideal incongruence) are often found to be prevalent in SH (O'Connor, 2007; Gilbert, McEwan, Irons et al., 2010). Furthermore, these findings support empirical evidence that 'believing in oneself' may be an important factor in the recovery process in SH (Wadman et al., 2016).

Self-perceptions were found to influence help-seeking. First, 'current-ideal' congruence improved help-seeking. This may be important as help-seeking within this group can be limited (Nada-Raje, Morrison & Skegg, 2003). This may be related to models of self-punishment in SH where a person may feel deserving of inflicting pain on themselves (Edmonson et al., 2016). However, it is worth noting that this finding may also be related to help-seeking occurring when SH no longer provides a means to self-care (Ogden & Bennett, 2015). Therefore, those who scored lower on this recovery outcome may view SH as a helpful means to care for themselves (Gratz, 2003). This point aligns with the second finding that 'current-SH self' congruence may prevent help-seeking. For example, if you derive some sense of self and belongingness identifying as a 'self-harmer', then it is understandable that

you would not wish to seek help (Lindgren, Wilstrand, Gilje et al., 2004). Such feelings have been identified as valued by those using SH message boards (Rodham, Gavin & Miles, 2007). It may be important, therefore, to understand how a person may conceptualize a SH identity and how this may influence their sense of recovery.

Self-Other Perceptions. Positioning oneself favorably in relation to others in society was associated with 'orientation to goals and success'. This supports previous findings surrounding the importance of subjective social status in increasing likelihood to think about and to attempt suicide (Wetherall et al., 2015). This result may also be related to the contribution of goal-focused attainment in supporting MH more generally (Livesey, Morrison, Clift et al., 2012). It may be important, therefore, to consider a person's particular goals and ways in which these may be achieved when working with those who SH.

The distance a person felt from others who SH was not able to explain recovery in this sample. This is despite phenomena within SH literature surrounding social contagion maintaining behaviors (Jarvi et al., 2013). This may be due to the heterogeneous processes involved in paths to, and processes of recovery from, SH (Wills, 2012). Therefore, it may be difficult to evaluate how another person who self-harms feels about themselves. It also may be related to reporting bias within face-to-face research where participants may not wish to disclose any potentially non-desirable opinions towards others who SH (Gollust, Eisenberg & Golberstein, 2008).

Quality assurances

Quality assurance checks were conducted throughout this study. First, developing the repertory grid with those with direct experiences of SH ensured that the measure reflected constructs relevant to those who SH. Second, by having two researchers at the data collection stage, this reduced the burden on researchers and permitted peer supervision throughout this

stage in the research process. Third, there was regular supervision with the study's qualified supervisor. This took place throughout the development, conduction and write-up of the study.

Limitations

There were a number of limitations in this study which should be considered. First, the sample comprised a high proportion of female participants therefore, the generalizability of the findings may be reduced. For example, the functions of a SH act may differ between men and women, with women hypothesized as reporting SH as a means to self-punish more than men (Rodham, Hawton & Evans, 2004); whereas men have been hypothesized as more likely to engage in lethal SH as a means of escape compared to women (Oliffe, Ogrodniczuk & Bottorff, 2012). This is particularly pertinent as suicidal SH is the largest killer of men under 45 (Office for National Statistics, 2014). Therefore, understanding processes of recovery within male samples is likely to be important. Future research may benefit from seeking ways to engage male participants. This could include studies involving online or telephone participation, as they may be more readily accessed by underrepresented SH groups (McDermott, Roen & Piela, 2013).

Second, although a specific scale was developed to assess participants' perceived recovery from SH, the RAS is a general assessment of recovery so may be related to recovery from difficulties other than SH, such as MH difficulties. Indeed, having a MH diagnosis was also able to explain recovery in two RAS scales: willingness to ask for help and not being dominated by symptoms. Assessments of recovery have been criticized for being overly-general (Leamy, Bird & Le Boutillier, 2011) and it is not uncommon for a person to seek recovery from a number of different difficulties, which may present in a number of converging way (Herman, 2001). However, the RAS appeared to align with key factors within SH groups so was felt to be an important indicator of SH recovery (Roe, 2001).

Third, the PR-SH was a one-item measure which considered recovery as a broad and idiosyncratic concept which may have limited utility within the heterogeneous sample used within this study. In addition, this scale was created for this study, therefore its validity and reliability has not been established. However, using this measure alongside the standardized RAS measure supported the robustness of the recovery outcomes. Future research may benefit from using the PR-SH and may be helpful clinically to support patient-led appraisals of recovery. In addition, further examination of what factors drive important SH recovery processes such as 'personal confidence and hope' and 'willingness to ask for help' may be useful.

Fourth, pre-determined elements and constructs were provided in this study, however self-perceptions are personally defined (Kaplan, 2006). In addition, meaningful and context-specific targets have been reported to be particularly helpful to support those who SH (Warner & Spandler, 2011). It was hoped that by drawing from more than one empirical source and consulting with those with SH experience, that the repertory grid developed reflected key constructs in this group. Future research may benefit from developing individualized repertory grids, potentially administered at numerous time points, as a tool to support SH interventions.

Fifth, it should be recognized that the factors examined may not have captured the breadth of potential factors which may influence SH recovery. Within the scope of this study, it was important to include factors which may currently be used to influence clinicians understanding of SH recovery (which may include: how recently a person engaged in SH; whether they have a MH diagnosis or personality instability). In addition, these factors were captured in a broad way due to the heterogeneous nature of the sample. Future research may benefit from understanding the influence of particular diagnostic frameworks (such as BPD or depression) on a person's processes to SH recovery.

Clinical Implications

The findings from this study indicated that factors that can be highlighted as important targets for SH recovery – cessation, a MH diagnosis, or personality instability - may not be good predictors of recovery outcomes. Therefore, we may need to think differently about what recovery from SH is. It may be helpful for those working alongside those who SH to consider the impact of self-perceptions in SH recovery. For example, staff working with those who SH can describe trivializing SH acts as a means to defend against a lack of confidence in working with this group (Hadfield et al., 2009). Furthermore, standardized psychological assessments have been criticized for reinforcing hopelessness for some who SH (Hunter, Chantler, Kapur et al., 2013). These factors have been found to be reduced through greater staff understanding of the person's own SH experiences (McHale & Felton, 2010). Therefore, providing a person-oriented framework through a focus on self-perceptions may be important to support a more positive reciprocal relationship between those who SH and clinicians (Onken, Dumont, Ridgway et al., 2002).

Self-perceptions could be a possible target of therapy and quantitative evaluations could readily be applied to clinical outcomes for services. This may fulfil a current gap in SH interventions, which have been criticized for lacking meaningful focus for individuals (Hunter et al., 2013). This may also be important due to the drive for individualized care targets, which have been cited as an important marker of recovery (Katsakou, Marougka, Barnicot et al., 2012).

Conclusions

Recovery from SH is an idiosyncratic process that may be limited in our understanding should generic markers be employed. Evaluating self-perceptions may be a way to provide clarity for where a person is in terms of their recovery. It may also present a

trans-diagnostic tool to support those wishing to focus on what is important to support their own SH recovery.

References

Adams, J., Rodham, K., & Gavin, J. (2005). Investigating the 'self' in deliberate self-harm. *Qualitative Health Research, 15*(10), 1293-1309. doi: 10.1177/104973230528176.

Atkinson, H. (1982). The stability and validity of quality of life measures. *Social Indicators Research, 10*(2), 113-132. doi: http://dx.doi.org/10.1007/1-4020-3742-2_11.

Bateman, A., & Fonagy, P. (2006). *Mentalization-based treatment for borderline personality disorder: A practical guide*. Oxford, UK: Oxford University Press.

Beck, R., Heffernan, S., Law, H., McCusker, M., Bentall, R. P., & Morrison, A. P. (2012). Subjective judgements of perceived recovery from psychosis. *Journal of Mental Health, 21*(6), 556-566. doi: http://dx.doi.org/10.3109/09638237.2012.710765.

Bedford, A., Davies, F., & Tibbles, J. (2009). The Personality Structure Questionnaire (PSQ): A cross-validation with a large clinical sample. *Clinical Psychology & Psychotherapy, 16*(1), 77-81. doi: 10.1002/cpp.603.

Borschmann, R., Hogg, J., Phillips, R., & Moran, P. (2012). Measuring self-harm in adults: A systematic review. *European Psychiatry, 27*(3), 176-180. doi:10.1016/j.eurpsy.2011.04.005

Brown, B. C., Moss, T. P., McGrouther, D. A., & Bayat, A. (2010). Skin scar preconceptions must be challenged: importance of self-perception in skin scarring. *Journal of Plastic, Reconstructive & Aesthetic Surgery, 63*(6), 1022-1029. doi: 10.1016/j.bjps.2009.03.019.

Burr, V., Giliberto, M., & Butt, T. (2014). Construing the cultural other and the self: A Personal Construct analysis of English and Italian perceptions of national character. *International Journal of Intercultural Relations, 39*, 53-65. doi:10.1016/j.ijintrel.2013.09.012.

Cantril, H. (1965). *The pattern of human concerns*. New Brunswick, NJ: Rutgers University Press.

Chapman, A., Gratz, K., & Brown, M. (2005). Solving the puzzle of deliberate self-harm: The experiential avoidance model. *Behaviour Research and Therapy, 44*, 371- 394. doi: http://dx.doi.org/10.1016/j.brat.2005.03.005.

Claes, L., Luyckx, K., & Bijttebier, P. (2014). Non-suicidal self-injury in adolescents: Prevalence and associations with identity formation above and beyond depression. *Personality and Individual Differences, 61*, 101-104. doi:10.1016/j.paid.2013.12.019.

Clarke, S., Thomas, P., & James, K. (2013). Cognitive analytic therapy for personality disorder: randomised controlled trial. *The British Journal of Psychiatry*, *202*(2), 129-134. doi: 10.1192/bjp.bp.112.108670.

Connell, M., Schweitzer, R., & King, R. (2015). Recovery from first-episode psychosis: A dialogical perspective. *Bulletin of the Menninger Clinic, 79*(1), 70-90. doi: http://dx.doi.org/10.1521/bumc.2015.79.1.70.

Corrigan, P. W., Giffort, D., Rashid, F., Leary, M. & Okeke, I. (1999). Recovery as a psychological construct. *Community Mental Health Journal, 35*(3), 231-239.

Corrigan, P. W., Salzer, M., Ralph, R. O., Sangster, Y., & Keck, L. (2004). Examining the factor structure of the recovery assessment scale. *Schizophrenia Bulletin*, *30*(4), 1035-1041. doi: http://dx.doi.org/10.1093/oxfordjournals.schbul.a007118.

Daine, K., Hawton, K., Singaravelu, V., Stewart, A., Simkin, S., & Montgomery, P. (2013). The power of the web: a systematic review of studies of the influence of the internet on self-harm and suicide in young people. *Plos One*, *8*(10), e77555. doi: http://dx.doi.org/10.1371/journal.pone.0077555.

Edmondson, A. J., Brennan, C. A., & House, A. O. (2016). Non-suicidal reasons for self-harm: A systematic review of self-reported accounts. *Journal of Affective Disorders, 191,* 109-117. doi: 10.1016/j.jad.2015.11.043.

Edwards, H. M., McDonald, S., & Young, S. M. (2009). The repertory grid technique: Its place in empirical software engineering research. *Information and Software Technology, 51,* 785–798. doi: http://dx.doi.org/10.1016/j.infsof.2008.08.008.

Emery, A. A., Heath, N. L., & Mills, D. J. (2016). Basic psychological need satisfaction, emotion dysregulation, and non-suicidal self-injury engagement in young adults: an application of self-determination theory. *Journal of Youth and Adolescence, 45*(3), 612-623. doi: http://dx.doi.org/10.1007/s10964-015-0405-y.

Faul, F., Erdfelder, E., Buchner, A., & Lang, A. G. (2009). Statistical power analyses using G*Power 3.1: Tests for correlation and regression analyses. *Behavior Research Methods, 41,* 1149-1160. Retrieved from http://www.gpower.hhu.de/en.html.

Fransella, F., Bell, R. & Bannister, D. (2004). *A manual for repertory grid technique* (2nd ed). West Sussex, UK: John Wiley & Sons.

Gelinas, B. L. & Wright, K. D. (2013). The cessation of deliberate self-harm in a university sample: the reasons, barriers, and strategies involved. *Archives of Suicide Research, 17*(4), 373-386. doi: 10.1080/13811118.2013.777003.

Gilbert, P., McEwan, K., Irons, C., Bhundia, R., Christie, R., Broomhead, C., & Rockliff, H. (2010). Self-harm in a mixed clinical population: The roles of self-criticism, shame, and social rank. *British Journal of Clinical Psychology, 49*(4), 563-576. doi: 10.1348/014466509X479771.

Gollust, S. E., Eisenberg, D., & Golberstein, E. (2008). Prevalence and correlates of self-injury among university students. *Journal of American College Health, 56*(5), 491-498. doi: 10.3200/JACH.56.5.491-498.

Gratz, K. L. (2003). Risk factors for and functions of deliberate self-harm: An empirical and conceptual review. *Clinical Psychology: Science and Practice, 10*(2), 192-205. doi: 10.1093/clipsy.bpg022.

Hadfield, J., Brown, D., Pembroke, L., & Hayward, M. (2009). Analysis of accident and emergency doctors' responses to treating people who self-harm. *Qualitative Health Research, 19*(6), 755-765. doi: 10.1177/1049732309334473.

Hazelton, M., Rossiter, R., & Milner, J. (2006). Managing the 'unmanageable': Training staff in the use of dialectical behaviour therapy for borderline personality disorder. *Contemporary Nurse, 21*(1), 120-130. doi: 10.5172/conu.2006.21.1.120.

Hawton, K., Haw, C., Casey, D., Bale, L., Brand, F., & Rutherford, D. (2015). Self-harm in Oxford, England: epidemiological and clinical trends, 1996–2010. *Social Psychiatry and Psychiatric Epidemiology, 50*(5), 695-704. doi: 10.1007/s00127-014-0990-1.

Hawton, K., & Van Heeringen, K. (2009). Suicide. *The Lancet, 373*, 1372-1381. doi: http://dx.doi.org/10.1016/S0140-6736(09)60372-X.

Hawton, K., Witt, K. G., Taylor-Salisbury, T. L., Arensman, E., Gunnell, D., Hazell, P., ... van Heeringen, K. (2016). Psychosocial interventions for self-harm in adults. *Cochrane Database of Systematic Reviews, 2016*(5), 5. Art. No.: CD012189. doi: 10.1002/14651858.CD012189.

Herman, J. (2001). *Trauma and recovery: The aftermath of violence, from domestic abuse to political terror*. London, UK: Pandora.

Higgins, E. T. (1987). Self-discrepancy: a theory relating self and affect. *Psychological Review, 94*(3), 319. doi: http://dx.doi.org/10.1037/0033-295X.94.3.319.

Himmelstein, M., & Tomiyama, A. J. (2015). It's Not You, It's Me Self-Perceptions, Antifat Attitudes, and Stereotyping of Obese Individuals. *Social Psychological and Personality Science*, 1948550615585831. doi: 10.1177/1948550615585831.

Hogg, M. A. (2006). Social identity theory. In P. J. Burke (Ed.), *Contemporary Social Psychological Theories*, (pp. 111-1369). Stanford, CA: Stanford University Press.

Hogg, M. A. & Abrams, D. (1988). *Social identification*. London, UK: Routledge.

Hunter, C., Chantler, K., Kapur, N., & Cooper, J. (2013). Service user perspectives on psychosocial assessment following self-harm and its impact on further help-seeking: A qualitative study. *Journal of Affective Disorders*, *145*(3), 315-323. doi: 10.1016/j.jad.2012.08.009.

Jarvi, S., Jackson, B., Swenson, L., & Crawford, H. (2013). The impact of social contagion on non-suicidal self-injury: A review of the literature. *Archives of Suicide Research*, *17*(1), 1-19. doi: 10.1080/13811118.2013.748404.

Kaplan, H. B. (2006). Self theory and emotions. In J. Turner & J. Stets (Eds.), *Handbook of the sociology of emotions* (pp. 224–53). New York, NY: Springer.

Kapur, N., House, A., Creed, F., Feldman, E., Friedman, T., & Guthrie, E. (1999). General hospital services for deliberate self-poisoning: an expensive road to nowhere? *Postgraduate Medical Journal*, *75*(888), 599-602. doi: 10.1136/pgmj.75.888.599.

Katsakou, C., Marougka, S., Barnicot, K., Savill, M., White, H., Lockwood, K., & Priebe, S. (2012). Recovery in borderline personality disorder (BPD): A qualitative study of service users' perspectives. *PloS One*, *7*(5), e36517. doi: http://dx.doi.org/10.1371/journal.pone.0036517.

Kelly, G. A. (1955). *The Psychology of Personal Constructs*. New York: Norton.

Kerr, P. L., Muehlenkamp, J. J., & Turner, J. M. (2010). Nonsuicidal self-injury: A review of current research for family medicine and primary care physicians. *The Journal of the American Board of Family Medicine*, *23*(2), 240-259. doi: http://dx.doi.org/10.3122/jabfm.2010.02.090110.

Klonsky, E.D., Oltmanns, T.F. & Turkheimer, E. (2003). Deliberate self-harm in a nonclinical population. Prevalence and psychological correlates. *American Journal of Psychiatry, 60*, 1501-1508. doi: http://dx.doi.org/10.1176/appi.ajp.160.8.1501.

Klonsky, E. D. & Muehlenkamp, J. J. (2007). Self-injury: A research review for the practitioner. *Journal of Clinical Psychology*, *63*(11), 1045-1056. doi: 10.1002/jclp.20412.

Lavin, D., & Ryan, P. (2012). Using quantitative research to measure recovery outcomes and correlates. *Irish Journal of Psychological Medicine, 29*(03), 157-162. doi: http://dx.doi.org/10.1017/S0790966700017183.

Law, G. U., Rostill-Brookes, H., & Goodman, D. (2009). Public stigma in health and non-healthcare students: Attributions, emotions and willingness to help with adolescent self-harm. *International Journal of Nursing Studies*, *46*(1), 108-119. doi: 10.1016/j.ijnurstu.2008.08.014.

Leamy, M., Bird, V., Le Boutillier, C., Williams, J., & Slade, M. (2011). Conceptual framework for personal recovery in mental health: Systematic review and narrative synthesis. *The British Journal of Psychiatry*, *199*(6), 445-452. doi: 10.1192/bjp.bp.110.083733.

Lindgren, B. M., Wilstrand, C., Gilje, F., & Olofsson, B. (2004). Struggling for hopefulness: A qualitative study of Swedish women who self-harm. *Journal of Psychiatric and Mental Health Nursing*, *11*(3), 284-291. doi: 10.1111/j.1365-2850.2004.00712.x.

Linehan, M. M., Schmidt, H., Dimeff, L. A., Craft, J. C., Kanter, J., & Comtois, K. A. (1999). Dialectical behavior therapy for patients with borderline personality disorder and drug-dependence. *The American Journal on Addictions*, *8*(4), 279-292. doi: 10.1080/105504999305686.

Livesey, L., Morrison, I., Clift, S., & Camic, P. (2012). Benefits of choral singing for social and mental wellbeing: Qualitative findings from a cross-national survey of choir members. *Journal of Public Mental Health*, *11*(1), 10-26. doi: http://dx.doi.org/10.1108/17465721211207275.

McDermott, E., Roen, K., & Piela, A. (2013). Hard-to-reach youth online: Methodological advances in self-harm research. *Sexuality Research and Social Policy, 10*(2), 125-134. doi: http://dx.doi.org/10.1007/s13178-012-0108-z.

McHale, J., & Felton, A. (2010). Self-harm: what's the problem? A literature review of the factors affecting attitudes towards self-harm. *Journal of Psychiatric and Mental Health Nursing*, *17*(8), 732-740. 10.1111/j.1365-2850.2010.01600.x.

Messer, B. & Harter, S. (2012). *The Self-Perception Profile for Adults: Manual and Questionnaires*. Retrieved from University of Denver: https://portfolio.du.edu/downloadItem/225566.

Muehlenkamp, J. J. (2012). Formal assessment of self-injury. In B. W. Walsh (Ed.), *Treating self-injury: A practical guide* (pp. 88-98). New York, NY: Guildford Press.

Muehlenkamp, J. J., Ertelt, T. W., Miller, A. L., & Claes, L. (2011). Borderline personality symptoms differentiate non-suicidal and suicidal self-injury in ethnically diverse adolescent outpatients. *Journal of Child Psychology and Psychiatry*, *52*(2), 148-155. doi: 10.1111/j.1469-7610.2010.02305.x.

Nada-Raja, S., Morrison, D., & Skegg, K. (2003). A population-based study of help-seeking for self-harm in young adults. *Australian and New Zealand Journal of Psychiatry*, *37*(5), 600-605. doi: 10.1046/j.1440-1614.2003.01252.x.

Nock, M. K., Holmberg, E. B., Photos, V. I. & Michel, B. D. (2007). Self-injurious thoughts and behaviors interview: Development, reliability and validity in an adolescent

sample. *Psychological Assessment, 19*(3), 309-317. doi: http://dx.doi.org/10.1037/1040-3590.19.3.309.

Nock, M. K. & Prinstein, M. J. (2004). A functional approach to the assessment of self-mutilation behaviour. *Journal of Counselling and Clinical Psychology, 72*, 885-890. doi: http://dx.doi.org/10.1037/0022-006X.72.5.885.

O'Connor, R. C. (2007). The relations between perfectionism and suicidality: A systematic review. *Suicide and Life-Threatening Behavior, 37*(6), 698-714. doi: 10.1521/suli.2007.37.6.698.

O'Connor, R. C., Armitage, C. J., & Gray, L. (2010). The role of clinical and social cognitive variables in parasuicide. *British Journal of Clinical Psychology, 45*(4), 465-481. doi: 10.1348/014466505X82315.

O'Connor, R. C., Ramussen, S. & Hawton, K. (2012). Distinguishing adolescents who think about self-harm from those who engaged in self-harm. *British Journal of Psychiatry, 200*(4), 330-335. doi: 10.1192/bjp.bp.111.097808.

Office for National Statistics (2014). *Suicides in the United Kingdom: 2014 registrations.* Retrieved from http://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/deaths/bulletins/suicidesintheunitedkingdom/2014registrations.

Ogden, J., & Bennett, A. (2015). Self-harm as a means to manage the public and private selves: A qualitative study of help seeking by adults. *Health Psychology Open, 2*(2), 1-9. doi: 10.1177/2055102915605987.

Oliffe, J. L., Ogrodniczuk, J. S., Bottorff, J. L., Johnson, J. L., & Hoyak, K. (2012). "You feel like you can't live anymore": Suicide from the perspectives of Canadian men who experience depression. *Social Science & Medicine, 74*(4), 506-514. doi:10.1016/j.socscimed.2010.03.057.

Onken, S. J., Dumont, J. M., Ridgway, P., Dornan, D. H., & Ralph, R. O. (2002). *Mental health recovery: What helps and what hinders? A national research project for the development of recovery facilitating system performance indicators. Phase one research report: A national study of consumer perspectives on what helps and hinders mental health recovery.* (National Association of State Mental Health Program Directors National Technical Assistance Center). Retrieved from https://www.researchgate.net/profile/Steven_Onken/publication/242469660_Mental_Health_Recovery_What_Helps_and_What_Hinders_A_National_Research_Project_for_the_Development_of_Recovery_Facilitating_System_Performance_Indicators_Phase_One_Research_Report_A_National_Study_of_Consumer_Perspectives_on_What_Helps_and_Hinders_Recovery/links/00b4953b5bb2ca0f00000000.pdf.

Padoa, C. T. (2008). *Deliberate self-harm: a search for self or a cry for help?* (Doctoral dissertation, University of Wollongong). Retrieved from http://ro.uow.edu.au/theses/146/.

Paget, A. & Ellett, L. (2014). Relationships among self, others, and persecutors in individuals with persecutory delusions: a repertory grid analysis. *Behavior Therapy,* 45, 273-282. doi: http://dx.doi.org/10.1016/j.beth.2013.12.001.

Parker, A. (1981). The meaning of attempted suicide to young parasuicides: A repertory grid study. *British Journal of Psychiatry, 139,* 306-312. doi: 10.1192/bjp.139.4.306.

Pollock, P. H., Broadbent, M., Clarke, S., Dorrian, A., & Ryle, A. (2001). The Personality Structure Questionnaire (PSQ): A measure of the multiple self states model of identity disturbance in cognitive analytic therapy. *Clinical Psychology & Psychotherapy*, *8*(1), 59-72. doi: 10.1002/cpp.250.

Rodham, K., Gavin, J., & Miles, M. (2007). I hear, I listen and I care: a qualitative investigation into the function of a self-harm message board. *Suicide and Life-threatening Behavior*, *37*(4), 422-430. doi: 10.1521/suli.2007.37.4.422.

Rodham, K., Hawton, K., & Evans, E. (2004). Reasons for deliberate self-harm: Comparison of self-poisoners and self-cutters in a community sample of adolescents. *Journal of the American Academy of Child & Adolescent Psychiatry*, *43*(1), 80-87. doi:10.1097/00004583-200401000-00017.

Roe, D. (2001). Progressing from patienthood to personhood across the multidimensional outcomes in schizophrenia and related disorders. *The Journal of Nervous and Mental Disease*, *189*(10), 691-699. doi: http://dx.doi.org/10.1097/00005053-200110000-00006.

Sakurai, K., Kawakami, N., Yamaoka, K., Ishikawa, H. & Hashimoto, H. (2010). The impact of subjective and objective social status on psychological distress among men and women in Japan. *Social Science & Medicine*, *70*, 1832-1839. doi:10.1016/j.socscimed.2010.01.019.

Salzer, M. S., & Brusilovskiy, E. (2014). Advancing recovery science: reliability and validity properties of the Recovery Assessment Scale. *Psychiatric Services*. Retrieved from http://ps.psychiatryonline.org/doi/pdf/10.1176/appi.ps.201300089.

Sansone, R. A. & Levitt, J. L. (2004). The prevalence of self-harm behaviour among those with eating disorders. In J. L. Levitt, R. A. Sansone, & L. Cohn, (Eds.), *Self-harm behavior and eating disorders: dynamics, assessment, and treatment* (pp. 3–14). East Sussex, UK: Brunner-Routledge.

Shaw, S. N. (2006). Certainty, revision, and ambivalence: a qualitative investigation into women's journeys to stop self-injuring. *Women & Therapy*, 29, 153-177. doi: 10.1300/J015v29n01_08.

Shea, J. (2010). Coming back normal: The process of self-recovery in those with schizophrenia. *Journal of the American Psychiatric Nurses Association*, *16*(1), 43–51. doi: http://dx.doi.org/10.1177/1078390309359197.

Simpson, A. (2006). Can mainstream health services provide meaningful care for people who self-harm? A critical reflection. *Journal of Psychiatric and Mental Health Nursing*, 13, 429–436. doi: 10.1111/j.1365-2850.2006.01000.x.

Singh-Manoux, A., Adler, N. E. & Marmot, M. G. (2003). Subjective social status: its determinants and its association with measures of ill-health in the Whitehall II study. *Social Science & Medicine, 56*, 1321-1333. doi: http://dx.doi.org/10.1016/S0277-9536(02)00131-4.

Skodol, A. E., Bender, D. S., Morey, L. C., Clark, L. A., Oldham, J. M., Alarcon, R. D., …Siever, L. J. (2011). Personality disorder types proposed for DSM-5. *Journal of Personality Disorders*, *25*(2), 136. doi: http://dx.doi.org/10.1521/pedi.2011.25.2.136.

Smith, S. D., Lynch, R. J., Stephens, H. F., & Kistner, J. A. (2015). Self-perceptions and their prediction of aggression in male juvenile offenders. *Child Psychiatry & Human Development*, *46*(4), 609-621. doi: http://dx.doi.org/10.1007/s10578-014-0504-0.

Taliaferro, L. A., & Muehlenkamp, J. J. (2014). Risk and protective factors that distinguish adolescents who attempt suicide from those who only consider suicide in the past year. *Suicide and Life-threatening Behavior*, *44*(1), 6-22. doi: 10.1111/sltb.12046.

Wadman, R., Clarke, D., Sayal, K., Vostanis, P., Armstrong, M., Harroe, C., …Townsend, E. (2016). An interpretative phenomenological analysis of the experience of self-harm repetition and recovery in young adults. *Journal of Health Psychology*, 1359105316631405. doi: 10.1177/1359105316631405.

Warner, S., & Spandler, H. (2012). New strategies for practice-based evidence: A focus on self-harm. *Qualitative Research in Psychology, 9*(1), 13-26. doi: 10.1080/14780887.2012.630631.

Wetherall, K., Daly, M., Robb, K. A., Wood, A. M., & O'Connor, R. C. (2015). Explaining the income and suicidality relationship: income rank is more strongly associated with suicidal thoughts and attempts than income. *Social Psychiatry and Psychiatric Epidemiology, 50*(6), 929-937. doi: http://dx.doi.org/10.1007/s00127-015-1050-1.

Whitlock, J., Prussien, K., & Pietrusza, C. (2015). Predictors of self-injury cessation and subsequent psychological growth: results of a probability sample survey of students in eight universities and colleges. *Child and Adolescent Psychiatry and Mental Health, 9*(1), 1-12. doi: 10.1186/s13034-015-0048-5.

Williams, J. M. G. (2001). *Suicide and attempted suicide: understanding the cry of pain*. London, UK: Penguin.

Wills, K. A. (2012). What does recovery mean to adults who self-injure? An interpretive phenomenological analysis. *International Journal of Psychosocial Rehabilitation.* 17(1): 93-116. Retrieved from http://www.psychosocial.com/IJPR_17/What_Does_Recovery_Mean_Wills.html.

Winter, D., Sireling, L., Riley, T., Metcalfe, C., Quaite, A. & Bhandari, S. (2007). A controlled trial of personal construct psychotherapy for deliberate self-harm. *Psychology and Psychotherapy: Theory, Research and Practice. 80*, 23-37. doi: 10.1348/147608306X102778.

Wood, S. (2011). *Exploring experiences and meanings of selfharm in south Asian women in the UK* (Doctoral thesis, University of Leeds, Leeds, UK). Retrieved from http://etheses.whiterose.ac.uk/id/eprint/2037.

Appendices

Appendix A: Author Guidelines for Target Journal A

Standards& Submission Guidelines

Content: This peer reviewed Journal is dedicated to the continuing development and ongoing evaluation of psychosocial rehabilitation, ACT programs and therapeutic techniques. As such, all articles remotely pertaining to such treatment will be considered for publication. However, the International Journal of Psychosocial Rehabilitation reserves the right to reject any and all articles, but will only do so in cases in which article content does not apply to the goals of the Journal.

Style: Though this journal maintains the publication standards set forth in the American Psychological Association's Publication Manual, we also recognize this may not be available to all practitioners throughout the world. We therefore view the manual as guidelines and not religious canon. Do your best to comply with the style manual, but submit your material anyway.

Editing: In keeping with the spirit of free speech across the internet, the materials presented for publication will not be edited beyond simple conversion to HTML format and presentation layout. It is therefore in your best interest to REALLY EDIT YOUR MATERIAL WELL. It will probably be published as submitted.

Format: All articles for consideration must be submitted in text, DOS text, hypertext or Word for Windows 'doc' format; transmitted in text, binary, or mime format. All Tables and Figures must be submitted in either Hypertext, Word for Windows 'Doc' format, GIF or JPEG files. There can be no exceptions to this policy as the technology for graphic insertion is limited. There are no size limitation on articles.

Preparing the Manuscript

Target Audience: mental health care professionals, applied researchers and service users in mental health or substance misuse programs

Length: Flexible, ranging from 1000 to 10,000words (10 to 20 double-spaced, typed pages), plus photos, charts, tables, and illustrations. Subjects that require extended treatment may be presented as a series (ie, Part I, Part II).

Organization: Where possible, articles presenting original data should be organized using standard scientific sections and subheadings: Introduction, Materials and Methods, Results, and Discussion. For articles in which these headings are not appropriate, such as review articles, descriptive subheadings should be provided to clarify the article's content. Reviews and other types of articles may be organized in a similar manner. For example, the introduction to a review article could describe the number of studies reviewed and the basic conclusions reached.

Essential Elements of a Manuscript

Author Responsibilities: It is required that all authors who (including every author of a multiauthored article):

Guarantee their sufficient participation in the planning, design, analysis, interpretation, writing, revising, and approval of the manuscript.

Disclose any and all financial information relevant to the article.

Every manuscript should contain the following elements, each beginning on a new page:

Title page
Abstract and keywords
References
Tables and Illustrations

Title Page: The title should be concise and informative. Authors should be listed by first name, middle initial, last name, and degree(s). A primary academic title and department affiliation should be provided for each author. Give the name, mailing address, and email address of the author responsible for correspondence.

Abstract and Keywords: The abstract, structured or unstructured as appropriate, should highlight the significant content of the article. A list of 3 to 5 keywords should be provided beneath the abstract for use by indexing and abstracting services.
manuscripts should be accompanied by an unstructured abstract of up to 150 words. Unstructured abstracts should address the objective, main points, and conclusion of the article. Abstracts are not required for editorials, commentaries, policy papers, book reviews, or special features.

References: References should be listed in alphabetical order. Use APA style for references Please remove all autoformatting and automatic reference numbering from the final document.

Captions: Captions for graphics or other supplemental material should be no more than 50 words. Include magnification, stain, and other pertinent data where applicable.

Acknowledgments and Permissions: Illustrations and tabulated data from other publications must be acknowledged and must have received permission from the previous publisher. Provide the following information where applicable: author(s), title of article or chapter, title of journal or book, volume number, page number(s), month and year of publication, and publisher name and location. The publisher's signed permission to reprint or adapt must be submitted with the manuscript.

Informed Consent: When human or animal subjects have been used in experimental investigations, the Methods section of the manuscript should include confirmation that appropriate institutional review board approval has been secured. When human subjects have participated in the investigation, the Methods section should also include a description of how informed consent was obtained from the patients.

Financial Disclosure, Conflict of Interest, and Data Access and Responsibility: All financial support for work should be noted in the submitted manuscript. Authors should disclose all financial information relevant to the article, such as employment, stock ownership or options, grants or patents received or pending, royalties, expert testimony, and the like. If there are no disclosures to be made, please state so clearly.

Appendix B: Quality Assessment Tool

General instructions: Grade each criterion as "Yes," "No," "Partially," or "Cannot tell."

Factors to consider when making an assessment are listed under each criterion. Note that some criteria will only apply to specify types of study.

1. **Unbiased selection of the cohort?**

Factors that help reduce selection bias:

- Inclusion/exclusion criteria
  - Clearly described
- Recruitment strategy
  - Clearly described

2. ***Selection minimizes baseline differences in prognostic factors (For controlled studies only)?***

Factors to consider:

- Was selection of the comparison group appropriate? Consider whether these two sources are likely to differ on factors related to the outcome (besides self-esteem status). Note that in instances of NSSI versus non-clinical controls, differences in clinical characteristics would be expected, but matching on key demographics (age, gender, ethnicity, education, etc.) would still be required to minimize bias.
- Did the study investigators do other things to ensure that exposed/unexposed groups were comparable, e.g., by using stratification or propensity scores?

3. ***Sample size calculated***

Factors to consider:

- Did the authors report conducting a power analysis or describe some other basis for determining the adequacy of study group sizes for the primary outcome(s) of interest to us?
- Did the eventual sample size deviate by $\leq$ 10% of the sample size suggested by the power calculation?

4. **Adequate description of the cohort?**

Consider whether the cohort is well-characterized in terms of baseline demographics?

- Consider key demographic information such as age, gender and ethnicity.
- Information regarding education or socio-economic characteristics is also important.

5. **Validated method for ascertaining self-esteem status?**

Factors to consider:

- Was the method used to ascertain self-esteem clearly described? (Details should be sufficient to permit replication in new studies)
- Was a valid and reliable measure used to ascertain self-esteem?

6. **Validated method for ascertaining NSSI?**

Factors to consider:

- Were primary outcomes assessed using valid and reliable measures? Note that measures that consist of single items of scales taken from larger measures are likely to lack content validity and reliability. Self-report measures tend to have lower reliability and validity than clinical interview.
- Were these measures implemented consistently across all study participants?

7. **Outcome assessment blind to exposure?**

- Were the study investigators who assessed outcomes blind to the NSSI status of participants? (Note that even in single-arm studies so degree of blinding is possible, for example using external interviewers with no knowledge of participants' clinical status).
- In studies where researcher effects are not likely due to method (e.g., online questionnaire or mailed questionnaire where there is no contact with researcher) there is unlikely to be bias here and blinding will not be needed.

8. ***Adequate follow-up period (longitudinal studies only)?***

Factors to consider:

- A justification of the follow-up period length is preferable.
- A follow-up period of at least 6 months is preferable for assessing NSSI (though if thoughts or cognitions relating to NSSI are the outcome, a shorted follow-up may be needed).
- Follow-up period should be the same for all groups
    - OK if differences in follow-up time were adjusted for using statistical techniques, e.g., survival analysis.

9. **Missing data**

Factors to consider:

- Did missing data from any group exceed 20%?
- In longitudinal studies consider attrition over time as a form of missing data. Note that the criteria of < 20% missing data may be unrealistic over longer follow-up periods.
- If missing data is present and substantial, were steps taken to minimize bias (e.g., sensitivity analysis or imputation).

10. ***Analysis controls for confounding (controlled studies and where studies test for predictors/correlates of NSSI)?***

Factors to consider for controlled studies:

- Does the study identify and control for important confounding variables and effect modifiers? Confounding variables are risk factors that are correlated with self-esteem status and outcome and may therefore bias the estimation of the effect of self-esteem status on outcome if unmeasured. These may include demographic and clinical variables (e.g., co-morbidity, hospital settings, and early adversity/trauma).

Factors to consider for studies looking at predictors of NSSI:

- Did the study control for likely demographic and clinical confounders? For example, using multiple regression to adjust for demographic or clinical factors likely to be correlated with predictor and outcome?

11. ***Analytic methods appropriate (Controlled studies and where studies test for predictors/correlates of NSSI)?***

Factors to consider:

- Was the kind of analysis done appropriate for the kind of outcome data (categorical, continuous, etc.)?
- Was the number of variables used in the analysis appropriate for the sample size? (The statistical techniques used must be appropriate to the data and take into account issues such as controlling for small sample size, clustering, rare outcomes, multiple comparison, and number of covariates for a given sample size).

Appendix C: Author Guidelines for Target Journal B

SCHOLARONE MANUSCRIPTS™

This journal uses ScholarOne Manuscripts (previously Manuscript Central) to peer review manuscript submissions. Please read the guide for ScholarOne authors before making a submission. Complete guidelines for preparing and submitting your manuscript to this journal are provided below.

Please note that ***Archives of Suicide Research*** uses CrossCheck™ software to screen papers for unoriginal material. By submitting your paper to ***Archives of Suicide Research*** you are agreeing to any necessary originality checks your paper may have to undergo during the peer review and production processes.

Archives of Suicide Research, the official journal of the International Academy for Suicide Research, is an international journal in the field devoted to suicide research. The contributions in Archives represent the breadth of suicide erudition in the scientific community featuring original research from diverse disciplines including biology, psychiatry, psychology, and sociology. The journal has become renowned for reporting on the most current and relevant aspects of suicide research, as well as defining the foundations of the field.

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Review Process. The Journal Editor and Editorial Staff determine whether the subject matter and content of the manuscripts submitted are pertinent to ASR. The manuscript will be sent out for peer review if it is found to be relevant and important. All reviewers remain anonymous. Authors will be informed of the Editor's decision regarding their manuscript's status of publication when the review process ends.

Publishing Ethics. The International Academy for Suicide Research and Taylor & Francis Group are committed to the highest academic, professional, legal, and ethical standards in publishing work in this journal. To this end, we have adopted a set of guidelines, to which all submitting authors are expected to adhere, to assure integrity and ethical publishing for authors, reviewers, and editors.

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Manuscript Organization. *Cover Letter.* A cover letter must be included indicating that the material is intended for publication and that all the authors have agreed to the content and submission of the manuscript. *Title page:* The title page should include the following:
- Title of the manuscript: Authors should also supply a shortened version of the title suitable

for the running head, not exceeding 50 characters and spaces.
- Total word count
-Up to 6 keywords (Please consult our guidance on keywords here.)

- Complete contact information: this includes the corresponding author's full name, title, telephone number, fax number, and e-mail address.

Disclosures and Acknowledgments: authors are required to disclose of all forms of support, including financial support or involvement in their cover letter. Pharmaceutical company and grant support, as well as any other supportive agency, grant number or contract, and acknowledgments of individuals should all be included here.

Abstract: Each article should be summarized in an abstract of no more than 120 words. Abstract should be separated into Objectives, Methods, Results, Conclusion. Avoid abbreviations, diagrams, and reference to the text.

Text: The contents of the text should adhere to the general structure of scientific papers: introduction, method, results, and discussion. If applicable, it should be made clear in the methods section that informed consent was obtained from subjects who participated in the study.

Illustrations: Illustrations submitted (line drawings, halftones, photos, photomicrographs, etc.) should be clean originals or digital files. Digital files are recommended for highest quality reproduction and should follow these guidelines: 300 dpi or higher; sized to fit on journal page; EPS, TIFF, or PSD format only; submitted as separate files, not embedded in text files.

Color illustrations will be considered for publication; however, the author will be required to bear the full cost involved in their printing and publication. The charge for the first page with color is $900.00. The next three pages with color are $450.00 each. A custom quote will be provided for color art totaling more than 4 journal pages. Good-quality color prints or files should be provided in their final size. The publisher has the right to refuse publication of color prints deemed unacceptable.

Tables and Figures

Tables and figures should be numbered and included as separate sheets or files. Tables and figures should not be embedded in the text. A short descriptive title should appear above each table with a clear legend and any footnotes suitably identified below. All units must be included. Figures should be completely labeled, taking into account necessary size reduction. Captions should be typed, double-spaced, on a separate sheet.

References

References should be listed on separate pages following the text. They should be listed alphabetically by first author and should not be numbered. Be sure all references have been cited in the text. Provide the last names and first initials of maximum three authors; "et al." should be used for articles containing more than three authors. Journal names should not be abbreviated. Italicize journal names and book titles. Article references should include the

author names, year of publication, title of the article, complete name of the journal, the volume and the page numbers in which the article appears.

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Appendix D: Study Poster

LIVERPOOL Mersey Care NHS NHS Trust

EXPRES; Version 1, 20/11/2014

Research Participants Wanted: Exploring Processes of Recovery in Self-Harm

Researchers at Liverpool University are looking for participants with a history of self-harm to take part in a study looking to better understand self-harm behaviours.

What is the study about?

This study aims to look at factors that may impact on a person's recovery from self-harm.

This includes thinking about their beliefs about self-harm and how they think about themselves and others

Who can take part?

We are looking for adults (18+) who currently self-harm or have self-harmed in the past.

What will I have to do?

You will be asked to meet with the researchers to complete some questionnaires.

This will last 1-2 hours.

Taking part in the study is completely voluntary.

You will receive £15 in Amazon vouchers as reimbursement for time.

If you decide to take part in the study you can withdraw at any time without giving a reason.

This will not affect the care you receive in anyway.

Interested in taking part or would like to find out more information?

Please contact the researchers, Rebecca & Khowla, directly on expres.liverpool@gmail.com.

THANK-YOU

Appendix E: Risk Protocol

Risk Assessment Notes (Liverpool)

Psychiatric Disorder:

1. Are you currently diagnosed with a psychiatric disorder, such as mood disorder (MDD, Bipolar), substance use disorder (alcohol or drugs), psychotic disorder, or personality disorder (BPD, Antisocial Personality Disorder)? [if yes, gain diagnosis(es)]

Suicide History:

2. Do you have a history of any suicide attempts? Y= safety plan (SP)

3. Do you have a family history of suicide attempts or completions?

4. How would you rank your current thoughts of suicide on a scale of 0-10, where zero is having no thoughts at all and 10 is having very serious thoughts? (1+ SP)

5. Do you currently have a plan to kill yourself? (If YES, ask #6)

6. Do you currently have access to means/ways to kill yourself, such as any drugs/medications?

7. How would you rank your current intent to kill yourself on a scale of 0-10, where zero is no intent and 10 is serious or high intent? (1=SP)

Other risk factors:

1. Have you experienced any recent loss, such as separation, divorce, break-up, bereavement?

2. How impulsive would you say you are currently feeling on a scale of 0-10, where zero is not impulsive at all and 10 is very impulsive?

3. How hopeless would you say you are about the future on a scale of 0-10, where zero is low in hopelessness or not hopeless and 10 is high in hopelessness?

4. How distressed, irritable or agitated are you right now on a scale of 0-10, where zero is not at all and 10 is very/highly?

5. How would you rate your current mood on a scale of 0-10, where zero is negative mood and 10 is positive mood?
   [For 0-10 scale answers, ask participant if that is about average for them]

Notes:

Protective Factors:

1. Are you currently in treatment? [If yes] Is your clinician aware that you currently have [insert participant's earlier suicidal/DSH ideation]

2. Are any of your family, friends, or flatmates aware that you currently have…

3. (IF they have a plan) You mentioned that you have a plan and that you have access to _____. Is there anyone who might be able to help you restrict access to]insert participant's earlier description of means]

4. Do you live alone or with others? Who do you live with?

If having current/recent thoughts of DSH/suicide:

Validate: Validate level of thoughts, intent, etc.

Ok, [name], so you mentioned that you have been having some _____ and I'm just wondering, have you ever heard of a safety plan? A safety plan is a series of steps that you take if you do have suicidal thoughts. It's a plan that could keep you from acting on your _____[insert participant's plans/ideation].

So when you are experiencing these _____, what are some coping mechanisms that maybe you use to make yourself feel better? *[This can also be a hobby or an interest that they find helps to take their mind off things, e.g. basketball, watching films, etc. If they have an interest and say that it helps, praise strategy, e.g. it's really good that you find going for a good run helps you calm down and feel better.]*

And in an emergency situation, who might you contact? You mentioned that _____ knows about _____. Would you feel comfortable contacting them? Let's say they weren't able to pick up the phone…is there anyone else you might feel comfortable contacting? *[If they mentioned a friend who knew in #2, then maybe ask their name to further engage. If GP or therapist, find out how often the participant sees them. Try and gauge their availability, e.g. if participant phoned them in a state of distress, would they be able to respond quickly and maybe give them an emergency appointment, or would they have to wait a long time to see/speak with them? Maybe also ask if they feel comfortable talking to their therapist/GP*

about their suicidal thoughts. If not, try and find other potential sources of support, e.g. family, friends, etc.]

Can you think of any steps you could take if talking to them doesn't help? Also keep in mind that you can always call a hotline, such as **The Samaritans on 08457 90 90 90**, **CALM on 0800 58 58 58** or **PAPYRUS on 0800 068 4141**, which are all anonymous hotlines. You can also call 999 or go to the nearest A&E department.

If no current/recent thoughts of DSH/suicide:

Are you familiar with what a safety plan is? Do you mind if I go over this briefly with you as we usually do with other people over the phone? A safety plan is a list of steps you take if you do have suicidal thoughts. For example, if the thoughts are moderate in intensity, we usually recommend that you contact your doctor, or family or friends if you feel comfortable doing so. You can call **The Samaritans on 08457 90 90 90**, **CALM on 0800 58 58 58** or **PAPYRUS on 0800 068 4141**, which are all anonymous hotlines . If the thoughts increase in intensity, we recommend you call 999 or go to the nearest A&E .

Turn over for risk assessment checklist and interview scheduling

Suicide Risk Assessment Protocol – checklist must be completed for each participant to assess risk level

Risk factors for suicide *(Interviewer complete known sections on own)*

- ❒ Male gender (females more attempts, males more completions)

- ❒ Ethnicity (white attempt & complete more than others)

- ❒ Age ≥16 years?

- ❒ Current psychiatric disorder?
    - ❒ Current mood disorder (MDD, Bipolar)
    - ❒ Current substance use disorder (alcohol, drugs)
    - ❒ Current psychotic disorder
    - ❒ Current personality disorder (esp. BPD or ASPD)

- ❒ Suicide history
    - ❒ Previous suicide attempt (yes/no)
    - ❒ Family history of suicide attempts/completions (yes/no)?
    - ❒ Current suicidal ideation (0-10 scale)?
    - ❒ Current plan (yes/no)?
        - Access to lethal means (firearm, drugs, etc)?
    - ❒ Current intent (On scale 0 – 10, what is your current intent to kill yourself ? ___)

- ❒ Other risk factors
    - ❒ Recent loss, separation/divorce/break-up?
    - ❒ Impulsiveness?
    - ❒ Hopelessness about the future?
    - ❒ Current distress, irritability, agitation or other "abnormal" mental state
    - ❒ Depressed mood (On scale 0 – 10 [0 = neg, 10 = pos] how would you rate your current mood? ___)

Protective factors & Safety plan:

❒ In treatment? If so, is clinician aware of risk? _____

❒ Family/roommate/friends aware of risk? _____

❒ [IF YES TO ACCESS] Means restriction (firearms, drugs, family/social support/monitoring)? _____

❒ Presence of children in the home, spouse/partner, or other positive relationships?

➢ CONTINUED OVERLEAF

❒ Steps taken to increase subject safety (check all that apply):

LOW RISK == No past attempt or current SITB:

- ❒ Validated subject's feelings
- ❒ Encourage S to contact clinician if distressed or in need of help in future
- ❒ Provide referrals as needed

MODERATE RISK == past attempt, but intent ≤6

- ❒ (check all completed above)
- ❒ S articulated own safety plan (i.e., what to do if thoughts/urges increase)
- ❒ Provided S with emergency contact numbers (999, find # of own clinician, Samaritans, CALM and PAPYRUS)

HIGH RISK == Current SI present, and intent 7-8, but no plan or access to lethal means

- ❒ (check all completed above)
- ❒ Encourage S to immediately contact support(s) and clinician(s)/psychiatric emergency services to inform of risk
- ❒ Call Peter Taylor/Susan Mitzman ***(must do)***

IMMINENT RISK == Current suicidal intent (7-8 with specific plan/access or 9-10

regardless of plan)

- ❒ (check all completed above)
- ❒ Call Peter Taylor ***(must do)***
- ❒ S tells/calls clinician and/or people in support network to inform them of level of risk and enlist their assistance in getting subject to a clinician ***(preferable)***
- ❒ If in with researcher: S should not leave alone. They can leave with family member/friend, experimenter should accompany S to Hospital Emergency Department ***(must do)***
- ❒ If on the phone: Subject should not remain at home alone. Experimenter tells/calls clinician and/or people in support network to inform them of level of risk and enlist their assistance in getting the S to a clinician ***(must do)***
- ❒ If an ambulance is being sent, stay on the phone with the S until the ambulance arrives.
- ❒ If S refuses to do the above: call 999 and inform of subject's location and risk level.

<u>NOTES:</u>

Assessor: _____ Date: _____

Appendix F: Telephone Screen

Interviewer: _____ Date: _____

Suicide Risk Phone Screen

PART A

Thank you for calling.

Just so you know, this is about a ten – fifteen minute phone screen. I'll first describe the study and then, if you are interested, ask a few questions to see if you are eligible for participation.

Ok, great! Before I explain the study to you, I should note that the few questions I'm going to eventually ask you are about sensitive topics so you might want to be in a private room.

Everything that you tell me during this phone call is confidential; HOWEVER, I must let you know that if you tell me that you or someone else is at imminent risk of harm, I must take the necessary steps to ensure your safety. This might include steps such as contacting the emergency services. Is this OK with you?

In case we get disconnected, could I take down your contact information at this point?

Name:_____

Address:_____

Phone Number: (Home) _____

(Mobile) _____

Email Address:_____

Note: *Email is not a secure means of communication and please only provide your email address if you are willing to receive an email from a Liverpool Gmail account.*

Ok great. Let me tell you a little bit about the study but please stop me along the way if you have any questions.

This study is designed to look at people's beliefs about and relationships with their self-harm and how this related to recovery. To be clear, you do not need to be currently self-harming in order to participate and it is ok to have a history of self-harm. I should also note that to take part in the study you will need to meet us for around 1 hour at the Psychology Department at Liverpool University. So far does this sound like something you could do? *[If yes, continue]*

To give you a more specific description: During the visit to the University you will fill out some questionnaires and talk with the researchers. Due to the nature of this research, some of the questions will be related to thoughts and feelings around self-harm. You will receive for completing this study as compensation for your time and travel. So far, does this sound like something you may be interested in? Do you have any questions?"

[If not interested]: Ok, well thank you for your time. Please don't hesitate to email us if you change your mind or have any questions.

[If the person is interested]: Great! Then I would like to ask you a few questions to see if you are appropriate for this study. We are looking for people with specific traits and experiences to participate. There are no right or wrong answers, but we are asking them to see if you are a match with this particular study. Some of the questions will be related to any history of self-harm. Do you have any questions for me before we begin?

Age (must be 18 or older)_____

Do you have any special requirements? *E.g. wheelchair access* _____

PART B

[Self-harm]

Have you ever engaged in self-harm? By self-harm, I mean any intention to harm yourself such as cutting, hitting or burning yourself or taking an overdose.

If so, how many times in your life have you engaged in self-harm? [If only once, then not eligible]

When was the last time?

[Suicide Ideation]

Have you ever had thoughts about actually killing yourself?

If so, when was the last time?

[If yes, provide details]

[Suicide Attempt]

Have you ever actually attempted to kill yourself?

If so, when was the last time?

[If yes, provide details] Can you give me some more information about what happened?

[Current Suicidality]

Currently, how would you rate your desire to live, with "10" being you really want to be alive and "0" being you very much want to be dead? **[If answered 3 or less, read small paragraph below, before going on to risk assessment PART D]**

Do you have any plan or intent to kill yourself at this time? **[If yes, read small paragraph below, before going on to risk assessment PART D]**

IF DESIRE TO LIVE 3 OR LESS OR INTENT/PLAN TO KILL ONESELF: *I am concerned to hear that you are currently having these thoughts. In our study, we are going to ask you about some things that may be difficult to talk about. Given you are currently feeling like you want to die, what I would like to do is first make sure you have someone to talk to about getting help, and we can talk more about the study later on.*

PART C: If person does <u>not</u> qualify

Thanks so much for answering these initial questions and for your interest in our study. Unfortunately, based on your initial responses, it looks like you do not qualify to participate

in this study. But we very much appreciate your calling and taking the time to speak with me. . Thank you very much for your time.

[If person asks about reason for not qualifying]: We are actually looking for people of a certain age, and history for this study – so it was nothing wrong at all with anything that you reported. You are just not a match with the characteristics we are looking for in this study.

[If more persistent]: We are looking for people who are [input criteria they do not meet e.g. over 18 with 2 or more episodes of DSH] so you do not match our criteria for this particular study. OK, thanks again for your time.

PART D: Risk Assessment

Thank you so much for your initial answers in the phone screen. Now, I am going to ask you a series of questions relating to your mental health history and your current wellbeing. Just to re-iterate, there are no right or wrong answers, please answer each as best you can.

CONDUCT RISK ASSESSMENT

[N.B. INPUT INFORMATION YOU HAVE ALREADY OBTAINED EARLIER IN THE CALL INTO THE RISK ASSESSMENT NOTES]

Appendix G: Study Information and Informed Consent Sheet

Mersey Care NHS
NHS Trust

UNIVERSITY OF LIVERPOOL

Participant Information Sheet

Research Study: Exploring Processes of Recovery in Self-harm (EXPRES)

We would like to invite you to take part in our research study. Before you decide we would like you to understand why the research is being done and what it would involve for you. One of the researchers will go through the information sheet with you and answer any questions you have. Please ask if there is anything that is not clear.

What is the purpose of the study?

This study aims to look at better understanding some of the factors that might impact on a person's recovery from self –harm. This includes looking at factors such as people's beliefs around their self-harm and how they think about themselves and others. It is hoped that findings from this research will help better guide future interventions and support for people who self-harm.

Why have I been invited?

You have been invited because you have direct experience of self-harming. You may currently self-harm, or you may have used self-harm in the past.

Do I have to take part?

No – it is your decision entirely. If you decide to take part, you will be asked to sign a consent form and you are free to withdraw at any time, without giving a reason. If you do decide to withdraw from the study, you can have the data you provide destroyed up to 48

hours after completing the study. After this point it will not be possible to destroy the data you have provided as it will be made anonymous. If you are currently receiving care, this would not be affected in any way. You will not have to answer any questions you do not wish to.

What will happen to me if I take part and what will I have to do?

You will be asked to meet with the researchers for a one-off meeting either at the University of Liverpool or at your preferred location (this could be your local library or health centre) if the University would be difficult to get to. These meetings will take place in a quiet and confidential space. We expect meetings to last around 1-2 hours and there will be opportunities to take breaks if needed. At the meeting you will be asked complete a number of questionnaires with the researcher which will ask some information about you, your health, wellbeing and on topics related to self-harm. The researcher will be available to answer any questions you have when completing the questionnaires. If you take part in the study you will be reimbursed for your time through receipt of a £15 Amazon voucher.

What are the possible risks of taking part?

- There is little risk involved in taking part in the study.
- Some people may find it difficult or upsetting to answer some questions on their experience of self-harm. The researcher will be able to support you and you do not have to continue with the study if you do not feel able.
- If you experience any problems the researchers will talk through a support plan with you.

What are the possible benefits of taking part?

- Although we cannot promise the study will help you, the information we collect will help improve people's understanding of self-harm and could shape treatment in the future.

What happens when the research study stops?

When you have completed all the study measures, you will not be asked to take any further part in the study.

The findings will be written up as part of the researchers' theses which will form part of their doctoral training as clinical psychologists. No confidential information will be used in these reports. The researchers also hope to publish papers in academic journals and to present the findings at conferences. If you wish, you will be sent a report describing the results of the research when the study has finished. If this is something you would like please state on the consent form that you would like to receive feedback.

What if there is a problem?

If you have a concern about any aspect of this study, you should speak to the researchers who will do their best to answer your questions. If you remain unhappy or have a complaint which you feel you cannot come to the researches with, then you should contact the Research Governance Officer at the University of Liverpool at ethics@liv.ac.uk or on 0151 794 8290. When contacting the Research Governance Officer, please provide details of the name or description of the study (so that it can be identified), the researchers involved, and the details of the complaint you wish to make.

What about confidentiality?

No information will be passed onto any other person without your permission. The only exception will be if there is a direct risk of harm to you or another person. In these cases it may be necessary to talk to another health professional, such as a GP or therapist. If this happens this would normally be discussed with you first before anything else happens.

All information collected about you during the study will be kept strictly confidential, and any information about you which has your name and address will be removed so that you cannot be recognised. You will not be named or identified in any reports of the study.

All data collected from the study will be kept safely and securely on a pass-word protected computer. Dr Peter Taylor (supervising this study) will be the custodian of all the study data. With your permission, the data will be archived and stored at the University of Liverpool for up to 10 years after the end of this study.

Who is organising and funding the study?

The University of Liverpool have provided the funds to carry out this study and the University of Liverpool is the study sponsor.

Who has reviewed the study?

This study was given a favourable ethical opinion for conduct in the NHS and other sectors by the Doctorate in Clinical Psychology Research Ethics Committee.

Who can I contact for further information this study?

If you have any questions at all, at any time please contact the researchers:

Miss Rebecca Forrester rebeccaf@liverpool.ac.uk

Miss Khowla Jomar khowlaj@liverpool.ac.uk

Alternatively, you may prefer to contact Dr Peter Taylor (0151 794 5025/ pjtay@liverpool.ac.uk) who is based at the Division of Clinical Psychology, Whelan Building, University of Liverpool, Liverpool, L69 3GB.

Who can I contact for more general information about taking part in research?

If you would like more general information about taking part in research, please contact Karen Wilding at the University of Liverpool on 0151 794 8373 or kwilding@liverpool.ac.uk who is independent from this study.

Thank you very much for taking time to read this information sheet

CONSENT FORM

Title of Project: Exploring Processes of Recovery in Self-Harm

Name of Researcher:

Participant Identification Number:

		Please initial the box
1	I confirm that I have read and understand the information sheet dated..... (version.....) for the above study. I have had the chance to think about the information, ask questions and have my questions answered.	
2	I understand that taking part is voluntary and that I can change my mind at any time without giving any reason, without my medical care or legal rights being affected.	
3	I understand that relevant sections of my medical notes and data collected during the study may be looked at by individuals from the University of Liverpool, from regulatory authorities or from the NHS Trust, where it is relevant to my taking part in this research. I give permission for these individuals to have access to my records	
4	I agree to take part in the above study	
5	I would like to receive a summary of the findings at the end of study	

Name of participant	Date	Signature
Name of person taking consent	Date	Signature

When completed: 1 for participant; 1 for researcher site file; 1 (original) to be kept in medical notes

Appendix H: Demographic Information Sheet and Questionnaires

Demographic Information Sheet

Demographic Questionnaire

Please tick each box as appropriate:

ABOUT YOU

1. **What is your gender?**

   - ☐ Male
   - ☐ Female
   - ☐ Other

2. **What is your age? (please select one)**

   - ☐ 18-29
   - ☐ 30-39
   - ☐ 40-49
   - ☐ 50-64
   - ☐ 65 years and older

3. **What is your ethnic group?**

   - ☐ White
   - ☐ Mixed
   - ☐ Asian
   - ☐ Black
   - ☐ Chinese
   - ☐ Other (Please Specify) _____

4. **What is your current employment status?**

   - ☐ Paid full-time employment
   - ☐ Paid part-time employment
   - ☐ Self-employed
   - ☐ Out of work and looking for work
   - ☐ Out of work but not currently looking for work
   - ☐ Voluntary work
   - ☐ A student
   - ☐ Military
   - ☐ Retired
   - ☐ Unable to work

ABOUT YOUR HEALTH

5. **Do you have a psychiatric/ mental health diagnosis?**

   - ☐ Yes
   - ☐ No

6. **Do you currently access mental health services?**

   - ☐ Yes
   - ☐ No

7. **Are you currently on any medication related to a mental health difficulty?**

   - ☐ Yes
     Please state _____
   - ☐ No

Thank-you for completing this questionnaire

Perceived Recovery from Self-Harm

On a scale of 0-10, where do you currently feel you are in terms of your recovery from self-harm?

0 1 2 3 4 5 6 7 8 9 10

(Not at all recovered from my self-harm) (Completely recovered from my self-harm)

Personality Structure Questionnaire

	1	2	3	4	5	
	Very true	True	May or may not be true	True	Very true	
1. My sense of self is always the same	O	O	O	O	O	How I act or feel is constantly changing
2. The various people in my life see me in much the same way	O	O	O	O	O	The various people in my life have different views of me as if I were not the same person
3. I have a stable and unchanging sense of myself	O	O	O	O	O	I am so different at different times that I wonder who I really am
4. I have no sense of opposed sides to my nature	O	O	O	O	O	I feel I am split between two (or more) ways of being, sharply differentiated from each other
5. My mood and sense of self seldom change suddenly	O	O	O	O	O	My mood can change abruptly in ways which make me feel unreal or out of control
6. My mood changes are always understandable	O	O	O	O	O	I am often confused by my mood changes which seem either unprovoked or quite out of scale with what provoked them
7. I never lose control	O	O	O	O	O	I get into states in which I lose control and do harm to myself and/or others
8. I never regret what I have said or done	O	O	O	O	O	I get into states in which I do and say things which I later deeply regret

Recovery Assessment Scale

Participant ID_____

PLEASE ANSWER THESE ITEMS ON AN AGREEMENT SCALE WHERE 1 IS "STRONGLY DISAGREE" AND 5 IS "STRONGLY AGREE."

	Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree
1. I have a desire to succeed.	1	2	3	4	5
2. I have my own plan for how to stay or become well.	1	2	3	4	5
3. I have goals in life that I want to reach.	1	2	3	4	5
4. I believe I can meet my current personal goals.	1	2	3	4	5
5. I have a purpose in life.	1	2	3	4	5
6. Even when I don't care about myself, other people do.	1	2	3	4	5
7. Fear doesn't stop me from living the way I want to.	1	2	3	4	5
8. I can handle what happens in my life.	1	2	3	4	5
9. I like myself.	1	2	3	4	5
10. I have an idea of who I want to become.	1	2	3	4	5
11. Something good will eventually happen.	1	2	3	4	5
12. I'm hopeful about my future.	1	2	3	4	5

	Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree
13. Coping with my mental illness is no longer the main focus of my life.	1	2	3	4	5
14. My symptoms interfere less and less with my life.	1	2	3	4	5
15. My symptoms seem to be a problem for shorter periods of time each time they occur.	1	2	3	4	5
16. I know when to ask for help.	1	2	3	4	5
17. I am willing to ask for help.	1	2	3	4	5
18. I ask for help, when I need it.	1	2	3	4	5
19. I can handle stress.	1	2	3	4	5
20. I have people I can count on.	1	2	3	4	5
21. Even when I don't believe in myself, other people do	1	2	3	4	5
22. It is important to have a variety of friends	1	2	3	4	5

Repertory Grid

Participant ID: 1 ←----------Rating----------→ 7	Me as I am	Me when I self-harm/Me as I was when I self-harmed	Me as I'd like to be	others who do not self-ham	other self-harmers	Parent(s)/ caregiver(s)	Friends	A stranger/man in the street
Hides feelings……Expresses feelings								
Finding things hard……Finding things easy								
Not recovered/far from recovery……..……Recovered/Recovering								
Not true to self……Accepting of self								
Ill/Unwell……Healthy								
Impulsive and desperate…… Sensible and plans ahead								
Shameful……Proud								
Looked down on……Looked up to								
Not accepting of others……Accepting of others								
Disempowered/invalidated……Empowered/validated								
Unable to cope with challenges ……..……...Able to cope/coping								
Uncared for……..Cared for								
Undeserving……..……..Deserving								
Not listened to……Listened to								
Blame myself for things……Blame my situation/experiences for things								

Subjective Social Status: Self-Anchoring Scales

1. The following ladder reflects where you feel you stand in the UK.

The top rung of ladder represents those with the highest standing in the UK and the bottom rung represents those with the lowest standing in the UK. The term "highest standing" represents those who are best off – those with most money, most education and most respected jobs; whereas the term "lowest standing" represents people who are worst off – those with the least money, least education and least respected jobs".

Place an **X** on the rung on where you think you stand, at this point in time, compared to others in the UK.

2. This next ladder reflects where you feel you stand in your community.

The top rung of ladder represents those with the highest standing in your community and the bottom rung represents those with the lowest standing in your community.

Place an **X** on the rung on where you think you stand, at this point in time, compared to others in your community.

3. This final ladder reflects where you feel others would place you on a ladder.

The top rung of ladder represents those with the highest standing and the bottom rung represents those with the lowest standing.

Place an **X** on the rung on where you think you others would place you on the ladder, at this point in time.

Suicide Attempt

36) Have you ever made an actual attempt to kill yourself in which you had at

36)_____

least some intent to die?

0) no 1) yes

We will refer to this as a suicide attempt.

If answered 'yes' please answer the following questions in this section.

37) How old were you the first time you made a suicide attempt? (*age)*

37)_____

38) When was the **most recent** attempt?

38)___/____/_____

39) How many days was that from today?

39)_____

88) not applicable

99) time unknown

40) How many suicide attempts have you made in your lifetime?

40)_____

41) How many have you made in the past year?

41)_____

42) How many have you made in the past month?

42)_____

43) How many have you made in the past week?

43)_____

44) What method did you use for your most recent attempt?

1) own prescription drugs	7) hanging	13) drowning
2) illicit drugs (not rx)	8) sharp object	14) suffocation
3) over-counter drugs	9) auto exhaust	15) other's rx drugs
4) poison	10) other gases	16) other ____
5) firearms	11) train/ car	17) multiple methods
6) immolation	12) jump from height	88) not applicable

99) unknown

45) What were the circumstances that contributed most to your most recent attempt?

Put in order of importance.

1) job loss/ job stress/ academic failure
2) dispute with family or friends
3) dispute with spouse/lover
4) financial problems
5) eviction
6) health problems
7) death of another person
8) psychiatric symptoms
9) humiliating event
10) other: _____
11) refuses to answer
88) not applicable
99) unknown

45a)_____

45b)_____

45c)_____

46) What kind of injuries did you have as a result of this attempt?

46)_____

Regarding the **most lethal** attempt:

47) When did it occur?

47)___/____/_____

48) What kind of injuries did you have as a result of this attempt?

48)_____

49) How long have you usually thought about suicide before making an attempt?

49)_____

0) 0 seconds

1) 1-60 seconds

2) 2-15 minutes

3) 16-60 minutes

4) less than one day

5) 1-2 days

6) more than 2 days

7) wide range (spans > 2 responses)

88) not applicable

99) unknown

50) On the scale of 0 to 4, what do you think the likelihood is that you will make a suicide attempt in the future?

50)_____

Non-Suicidal Self-Injury

62) Have you ever actually engaged in NSSI?

62)_____

0) no

1) yes

63) How old were you the first time? (*age)*

63)_____

64) How old were you the last time? (*age)*

64)_____

65) How many times in your life have you engaged in NSSI?

65)_____

66) How many times in the past year?

66)_____

67) How many times in the past month?

67)_____

68) How many times in the past week?

68)_____

69) Now I'm going to go through a list of things that people have done to harm themselves. Please let me know which of these you've done:

69a)_____

1) cut or carved skin

2) hit yourself on purpose

69b)_____

3) pulled your hair out

4) gave yourself a tattoo

69c)_____

5) picked at a wound

6) burned your skin (i.e., with a cigarette, match or other hot object)

69d)_____

7) inserted objects under your nails or skin

8) bit yourself (e.g., your mouth or lip)

69e)_____

9) picked areas of your body to the point of drawing blood

10) scraped your skin

11) “erased” your skin to the point of drawing blood

12) other (specify):_____

88) not applicable

99) unknown

70) Have you ever received medical treatment for harm caused by NSSI?

70)_____

0) no

1) yes

88) not applicable

99) unknown

71) On average, for how long have you thought about NSSI before engaging in it?

71)_____

0) 0 seconds

1) 1-60 seconds

2) 2-15 minutes

3) 16-60 minutes

4) less than one day

5) 1-2 days

6) more than 2 days

7) wide range (spans > 2 responses)

88) not applicable

99) unknown

72) On the scale of 0 to 4, what do you think the likelihood is that you will

72)_____

engage in NSSI in the future?

Appendix I: Statement on Study Recruitment and Ethical Approvals with Amendment

Study Recruitment

This study was one of a pair of studies conducted in the University of Liverpool which focused on factors contributing to recovery in self-harm. Each study involved distinct research questions and aims however, both studies focused on the same population and adopted some overlapping sets of measures. Consequently, in order to reduce burden to participants, services and researchers, it was decided that the two studies would run simultaneously as a broader study. This broader study was called Exploring Processes of Recovery in Self-harm (EXPRES) and involved a single methodology. In other words, participants were asked to consent to take part in the broader study (i.e. to take part in the two studies). Participants were recruited together for both studies and completed a single set of measures which covered the aims of both studies. Due to the single methodology, ethical approval was sought jointly, as the broader study. As result, all study correspondence and documents refer to EXPRES research study.

Ethical Approval Letters

UNIVERSITY OF LIVERPOOL

D.Clin.Psychology Programme
Division of Clinical Psychology
Whelan Building, Quadrangle
Brownlow Hill
LIVERPOOL
L69 3GB

Tel: 0151 794 5530/5534/5877
Fax: 0151 794 5537
www.liv.ac.uk/dclinpsychol

30th July 2014

Rebecca Forrester
Clinical Psychology Trainee
Doctorate of Clinical Psychology Doctorate Programme
University of Liverpool
L69 3GB

RE: Exploring the role of negative self-perceptions in recovery from self-harm
Trainee: Rebecca Forrester
Supervisors: Peter Taylor, Susan Mitzman

Dear Rebecca,

Thank you for your response to the Chair's comments of your research proposal submitted to the D.Clin.Psychol. Research Review Committee (letter dated 30/07/14).

I can now confirm that your amended proposal (version 2, dated 16/07/14) and revised budget (version 2, dated 16/07/14) meet the requirements of the committee and have been approved by the Committee Chair.

Please take this Chairs Action decision as *final* approval from the committee.

You may now progress to the next stages of your research.

I wish you well with your research project.

Dr Catrin Eames
Vice-Chair D.Clin.Psychol. Research Review Committee.

A member of the Russell Group

Professor John Read, Programme Director, readj@liv.ac.uk
Dr Jim Williams, Clinical Director, j.r.williams@liv.ac.uk
Dr Joanne Dickson, Research Director, jdickson@liv.ac.uk
Dr Laura Golding, Academic Director, l.golding@liv.ac.uk
Mrs Sue Knight, Programme Co-ordinator, sknight@liv.ac.uk

NHS
Health Research Authority
National Research Ethics Service
NRES Committee Northwest – Greater Manchester West
3rd Floor
Barlow House
4 Minshull Street
Manchester
M1 3DZ

Telephone: 0161 625 7434

15 January 2015

Dr Peter Taylor
Lecturer in Clinical Psychology
University of Liverpool
Institute of Psychology, Health and Society
Whelan Building, Brownlow Hill
Liverpool
L69 3GB

Dear Dr Taylor

Study title:	**Exploring Processes of Recovery in Self-harm (EXPRES)**
REC reference:	**15/NW/0006**
Protocol number:	**UoL001097**
IRAS project ID:	**165410**

The Research Ethics Committee reviewed the above application at the meeting held on 09 January 2015. Thank you for attending to discuss the application.

We plan to publish your research summary wording for the above study on the HRA website, together with your contact details, unless you expressly withhold permission to do so. Publication will be no earlier than three months from the date of this favourable opinion letter. Should you wish to provide a substitute contact point, require further information, or wish to make a request to postpone publication, please contact the REC Manager Anna Bannister, nrescommittee.northwest-gmwest@nhs.net.

Ethical opinion

The members of the Committee present gave a favourable ethical opinion of the above research on the basis described in the application form, protocol and supporting documentation, subject to the conditions specified below. .

Conditions of the favourable opinion

The favourable opinion is subject to the following conditions being met prior to the start of the study.

1. The Committee would like the Consent form to include the standard regulatory clause - I understand that relevant sections of my medical notes and data collected during the study, may be looked at by individuals from [COMPANY NAME], from regulatory authorities or from the NHS Trust, where it is relevant to my taking part in this research. I give permission for these individuals to have access to my records.

2. The Committee would like the Participant Information Sheet to include that the questionnaires will take 1 to 2 hours to complete and participants will be able to take necessary breaks if needed.

You should notify the REC in writing once all conditions have been met (except for site approvals from host organisations) and provide copies of any revised documentation with updated version numbers. The REC will acknowledge receipt and provide a final list of the approved documentation for the study, which can be made available to host organisations to facilitate their permission for the study. Failure to provide the final versions to the REC may cause delay in obtaining permissions.

Management permission or approval must be obtained from each host organisation prior to the start of the study at the site concerned.

Management permission ("R&D approval") should be sought from all NHS organisations involved in the study in accordance with NHS research governance arrangements.

Guidance on applying for NHS permission for research is available in the Integrated Research Application System or at http://www.rdforum.nhs.uk.

Where a NHS organisation's role in the study is limited to identifying and referring potential participants to research sites ("participant identification centre"), guidance should be sought from the R&D office on the information it requires to give permission for this activity.

For non-NHS sites, site management permission should be obtained in accordance with the procedures of the relevant host organisation.

Sponsors are not required to notify the Committee of approvals from host organisations.

Registration of Clinical Trials

All clinical trials (defined as the first four categories on question 2 of the IRAS filter page) must be registered on a publically accessible database within 6 weeks of recruitment of the first participant (for medical device studies, within the timeline determined by the current registration and publication trees).

There is no requirement to separately notify the REC but you should do so at the earliest opportunity e.g. when submitting an amendment. We will audit the registration details as part of the annual progress reporting process.

To ensure transparency in research, we strongly recommend that all research is registered but for non-clinical trials this is not currently mandatory.

If a sponsor wishes to contest the need for registration they should contact Catherine Blewett (catherineblewett@nhs.net), the HRA does not, however, expect exceptions to be made. Guidance on where to register is provided within IRAS.

It is the responsibility of the sponsor to ensure that all the conditions are complied with before the start of the study or its initiation at a particular site (as applicable).

Ethical review of research sites

NHS Sites

The favourable opinion applies to all NHS sites taking part in the study taking part in the study, subject to management permission being obtained from the NHS/HSC R&D office prior to the start of the study (see "Conditions of the favourable opinion" below).

Summary of discussion at the meeting

Ethical issues raised by the Committee in private discussion, together with responses given by the researcher when invited into the meeting.

The Chair welcomed Miss Rebecca Forrester and Miss Khowla Jomer and thanked them for attending to discuss the study. The Committee said they thought it was an interesting study and had enjoyed reading it.

Social or scientific value; scientific design and conduct of the study

The Committee though this was a valuable study and there has been PPI involvement in developing the study.

The Committee noted participants would be completing 9 questionnaires but queried why only data analysis would include only 2 out of the 9 questionnaires. Miss Forrester and Miss Jomar confirmed that was correct. They explained that this is a heterogeneous group and did not want to miss anything out and do justice to the research. They explained that they did not want to miss other factors that could influence the outcomes measures of the study. The Committee asked if they would enter all the data from the questionnaires and how they would analyse it all. Miss Forrester and Miss Jomar confirmed that they would enter all the data for the 9 questionnaires. They explained that they would each look at the data differently and see how variables affect their own research hypothesis. The Committee explained the reason why they were asking as participants are giving up a lot of time to be a part of the study and did not want their time to be wasted if the data collected was not being used.

The Committee noted A60 in the IRAS form where the researchers explain the sample size and power calculations was incoherent in parts and did not explain how the sample size was calculated. The Committee thought the rationale was more that the sample size was how many the researchers could include rather than how many they need to achieve statistical significant. Miss Forrester and Miss Jomar explained that the power calculation was based on previous studies and between the two of them they would be able to research this number. They explained that they have 3 different ways of recruitment which would help them reach the target sample size. They explained that they have already received some good feed-back from clinicians that patients would be interested in the study.

Favourable risk benefit ratio; anticipated benefit/risks for research participants (present and future)

The Committee noted interviews would take place primarily at the University with some at local health centres or libraries where travel is an issue. In A6-2 it states that there would always be two researchers present at all stages of the study whilst A26 states that if the researcher is seeing a participant alone in a community setting then the NHS lone-worker policy would be followed. The Committee queried if participants would be interviewed at their home. Miss Forrester and Miss Jomar confirmed that they would go to participant's homes if this is more convenient for them but would always be in pairs and would follow the lone worker policy too.

Care and protection of research participants; respect for potential and enrolled participants' welfare and dignity

The Committee queried how long it would take to fill out all the questionnaires and queried if over 60 minutes would breaks be offered. Miss Forrester and Miss Jomar explained that they piloted themselves how long it would take to complete the questionnaires and it took them an hour. They explained that for vulnerable participants it could take longer and thought they could inform participants it could take between 1 to 2 hrs.

The Committee queried if participants would be given an id code number. Miss Forrester and Miss Jomar confirmed participants would be given a id code.

Informed consent process and the adequacy and completeness of participant information

The Committee noted the consent form was missing the standard clause re authorities having access to data.

Independent review

The Committee noted that only one of the students peer reviews was included and queried if Bebecca Forrester had had her PhD part of the study reviewed. Miss Forrester confirmed she has had a peer review and it was an oversight that it was not included in the application.

Miss Forrester and Miss Jomar had no questionnaires.

Approved documents

The documents reviewed and approved at the meeting were:

Document	*Version*	*Date*
Copies of advertisement materials for research participants [Study Poster]	1	20 November 2014
Copies of advertisement materials for research participants [Site-Specific Study Poster]	1	20 November 2014
Copies of advertisement materials for research participants [Study Leaflet]	1	20 November 2014
Covering letter on headed paper [Covering Letter for EXPRES]	1	26 November 2014
Evidence of Sponsor insurance or indemnity (non NHS Sponsors only) [JRO Insurance Cover]		01 August 2014
IRAS Checklist XML [Checklist_03122014]		03 December 2014
IRAS Checklist XML [Checklist_11122014]		11 December 2014
IRAS Checklist XML [Checklist_11122014]		11 December 2014
Letter from sponsor [JRO Sponsorship Letter]		03 November 2014
Non-validated questionnaire [Demographic Questionnaire]	1	20 November 2014
Non-validated questionnaire [Self-Harm Beliefs Scale (SHBS)]	1	20 November 2014
Non-validated questionnaire [The Repertory Grid]	1	20 November 2014
Non-validated questionnaire [Self- Anchoring Scales]	1	20 November 2014
Non-validated questionnaire [Perceived Recovery from Self Harm]	1	20 November 2014
Other [Telephone Screen and Risk Assessment]	1	20 November 2014
Other [Participant Risk Assessment]	1	20 November 2014
Participant consent form [Consent Form (EXPRES)]	1	20 November 2014
Participant information sheet (PIS) [Participant Information Sheet]	1	20 November 2014
REC Application Form [REC_Form_11122014]		11 December 2014
Referee's report or other scientific critique report [RRC Formal approval for Khowla Jomar]	1	01 September 2014
Research protocol or project proposal [EXPRES Protocol]	1	20 October 2014
Summary CV for Chief Investigator (CI) [CV for Peter Taylor]	1	20 November 2014
Summary CV for student [CV for students]	1	20 November 2014
Summary CV for supervisor (student research) [CV for Dr Joanne Dickson and Dr Susan Mitman]	1	20 November 2014
Summary, synopsis or diagram (flowchart) of protocol in non technical language [Study Flow Diagram]	1	20 November 2014
Validated questionnaire [Self Injurious Thoughts and Behaviour Interview SITBI]	1	20 November 2014
Validated questionnaire [RECOVERY ASSESSMENT SCALE	1	20 November 2014

(RAS)]		
Validated questionnaire [WARWICK EDINBURGH MENTAL WELL-BEING SCALE (WEMWBS)]	1	20 November 2014
Validated questionnaire [Experience of Shame Scale (ESS)]	1	20 November 2014
Validated questionnaire [Personality Structure Questionnaire (PSQ)]	1	20 November 2014

Membership of the Committee

The members of the Ethics Committee who were present at the meeting are listed on the attached sheet.

After ethical review

Reporting requirements

The attached document "After ethical review – guidance for researchers" gives detailed guidance on reporting requirements for studies with a favourable opinion, including:

- Notifying substantial amendments
- Adding new sites and investigators
- Notification of serious breaches of the protocol
- Progress and safety reports
- Notifying the end of the study

The HRA website also provides guidance on these topics, which is updated in the light of changes in reporting requirements or procedures.

User Feedback

The Health Research Authority is continually striving to provide a high quality service to all applicants and sponsors. You are invited to give your view of the service you have received and the application procedure. If you wish to make your views known please use the feedback form available on the HRA website: http://www.hra.nhs.uk/about-the-hra/governance/quality-assurance/

HRA Training

We are pleased to welcome researchers and R&D staff at our training days – see details at http://www.hra.nhs.uk/hra-training/

15/NW/0006	**Please quote this number on all correspondence**

With the Committee's best wishes for the success of this project.

Yours sincerely

Dr Lorraine Lighton (Chair)
Chair

E-mail: nrescommittee.northwest-gmwest@nhs.net

Dr Peter Taylor
Lecturer in Clinical Psychology
University of Liverpool
Institute of Psychology, Health and Society
Whelan Building, Brownlow Hill
Liverpool

L69 3GB

19th January 2015

NRES Committee Northwest – Greater Manchester West
3rd Floor
Barlow House
4 Minshull Street
Manchester
M1 3DZ

Dear Research Ethics Committee,

Please find attached required recommendations following recent ethical review meeting held on the 9th January 2015. Specifically I enclose the following:

Study title:	**Exploring Processes of Recovery in Self-harm (EXPRES)**
REC reference:	**15/NW/0006**
Protocol number:	**UoL001097**
IRAS project ID:	**165410**

A revised consent form now including the standard regulatory clause, "I understand that relevant sections of my medical notes and data collected during the study, may be looked at by individuals from the University of Liverpool, from regulatory authorities or from the NHS Trust, where it is relevant to my taking part in this research. I give permission for these individuals to have access to my records".

A revised participant information sheet that now states that the questionnaires will take 1 to 2 hours to complete and participants will be able to take breaks if necessary.
Please do not hesitate to contact us for further information.

Kind Regards,

Dr Peter Taylor

NHS
Health Research Authority
National Research Ethics Service

NRES Committee North West - Greater Manchester West
Barlow House
3rd Floor
4 Minshull Street
Manchester
M1 3DZ

20 January 2015

Dr Peter Taylor
Lecturer in Clinical Psychology
University of Liverpool
Doctorate in Clinical Psychology, Institute of Psychology, Health and Society
Whelan Building, Brownlow Hill
Liverpool
L69 3GB

Dear Dr Taylor

Study title:	**Exploring Processes of Recovery in Self-harm (EXPRES)**
REC reference:	**15/NW/0006**
Protocol number:	**UoL001097**
IRAS project ID:	**165410**

Thank you for your email of 19 January 2015. I can confirm the REC has received the documents listed below and that these comply with the approval conditions detailed in our letter dated 15 January 2015.

Documents received

The documents received were as follows:

Document	*Version*	*Date*
Covering letter on headed paper [REC Response to Favourable with Conditions Letter]		19 January 2015
Participant consent form [Informed Consent Form]	2.0	19 January 2015
Participant information sheet (PIS) [Participant Information Sheet]	2.0	19 January 2015

Approved documents

The final list of approved documentation for the study is therefore as follows:

Document	*Version*	*Date*
Copies of advertisement materials for research participants [Study Poster]	1	20 November 2014
Copies of advertisement materials for research participants [Site-Specific Study Poster]	1	20 November 2014
Copies of advertisement materials for research participants [Study Leaflet]	1	20 November 2014
Covering letter on headed paper [Covering Letter for EXPRES]	1	26 November 2014
Covering letter on headed paper [REC Response to Favourable with		19 January 2015

Conditions Letter]		
Evidence of Sponsor insurance or indemnity (non NHS Sponsors only) [JRO Insurance Cover]		01 August 2014
IRAS Checklist XML [Checklist_11122014]		11 December 2014
Letter from sponsor [JRO Sponsorship Letter]		03 November 2014
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Other [Participant Risk Assessment]	1	20 November 2014
Participant consent form [Informed Consent Form]	2.0	19 January 2015
Participant information sheet (PIS) [Participant Information Sheet]	2.0	19 January 2015
REC Application Form [REC_Form_11122014]		11 December 2014
Referee's report or other scientific critique report [RRC Formal approval for Khowla Jomar]	1	01 September 2014
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Validated questionnaire [RECOVERY ASSESSMENT SCALE (RAS)]	1	20 November 2014
Validated questionnaire [WARWICK EDINBURGH MENTAL WELL-BEING SCALE (WEMWBS)]	1	20 November 2014
Validated questionnaire [Experience of Shame Scale (ESS)]	1	20 November 2014
Validated questionnaire [Personality Structure Questionnaire (PSQ)]	1	20 November 2014

You should ensure that the sponsor has a copy of the final documentation for the study. It is the sponsor's responsibility to ensure that the documentation is made available to R&D offices at all participating sites.

15/NW/0006 **Please quote this number on all correspondence**

Yours sincerely

K. Southeard

Miss Katie Southeard
REC Assistant

E-mail: nrescommittee.northwest-gmwest@nhs.net

Copy to: *Mr Alex Astor*

Appendix J: Pre-Study Consultation

Herein describes the consultations which took place to guide development of the research questions. In both incidences, in attendance was the researcher, the researcher from the overarching EXPRES study (K.J.), and an 'expert by experience' (someone with either current or a history of self-harm).

The consultations were kept informal in nature and was an opportunity for the researcher to present the proposed research questions and proposed methodology for gathering data. The 'expert by experience' was then invited to share their thoughts on the project: what worked well and what may need further development. They were also asked for their thoughts on any additional constructs or elements which could be useful additions to the repertory grid methodology.

All identifiable information was changed and minimal demographic information shared to maintain confidentiality of those taking part.

Consultation 1: 'Paige' who no longer self-harms.

This consultation took place at a local café, at the request of Paige.

Question 1: What parts of the project work well?

Answer 1: Paige reported that it will be really helpful to include both a clinical and non-clinical sample. Paige has never accessed services for her self-harm and felt that often it can be a 'hidden difficulty'. Paige reported that she found both positive and negative outcomes from her self-harm behaviors. She reported that services may have a potentially negative attitude towards those who self-harm (e.g. harm reduction strategies) so this may impact the results if only looking at a clinical population. In relation to the constructs and elements in the repertory grid, Paige reflected the following:

- The construct – "express/hide feelings", both of these relate to her experiences and are good constructs.
- The element "me as I'd like to be" – really good to include this.
- Construct 5 "ill/unwell…healthy" also very good and relevant, certainly for my experiences.

Question 2: Are there parts of the project which may require further development?

Answer 2: Paige offered the following points based on particular parts of the repertory grid:

- "me compared to others" – clarify what 'others' means…i.e. 'other self-harmers' OR 'others who do not self-harm' as these could be different.
- Complete one element at a time i.e. "me as I am" and go down each construct, therefore, only thinking about one part of the self at a time. It may be overwhelming otherwise.
- Order of elements – it could be helpful to have "me as I'd like to be" near the end –ie "me as I am"---"me compared…"---"me as I'd like to be".

Question 3: Are there any elements or constructs you feel it would be important to add to the project?

Answer 3: Paige offered the following based on the repertory grid:

- "me when I'm around people who know I self-harm" or "me when I'm on my own self-harming" – suggested elements to add.

<u>Consultation 2: 'Leanne' who still self-harms and is engaged with mental health services.</u>

This consultation took place at a local health center, in a private room.

Question 1: What parts of the project work well?

Answer 1: Leanne reported that she thought it was good the project was focusing on aspects of recovery as it is something which we have to better understand to better support those who are suffering.

Question 2: Are there parts of the project which may require further development?

Answer 2: Leanne offered the following points relating to the repertory grid:

- I "still self-harm" – but don't 'have an awareness' as I dissociate therefore difficult to answer. May be worth being aware of this should anyone else come forward for the study who has no awareness of their SH.
- It would be difficult to answer "others who do not self-harm" so might need to give participants a bit of time or support through this.

Question 3: Are there any elements or constructs you feel it would be important to add to the project?

Answer 3: Leanne offered the following points regarding the repertory grid:

- Maybe asking about recovery / "do you feel to blame?" "not beating themselves up" something like:
    - I blame myself ---------- I blame my situation/life
- Looking after wounds is really important, even if they don't think they deserve it. Something like:
    - Not deserving---------- deserving could be useful.
- It will be better to cover up other elements and only look at one at a time.

Appendix K: Data Screening to Test Assumptions for Regression Analyses

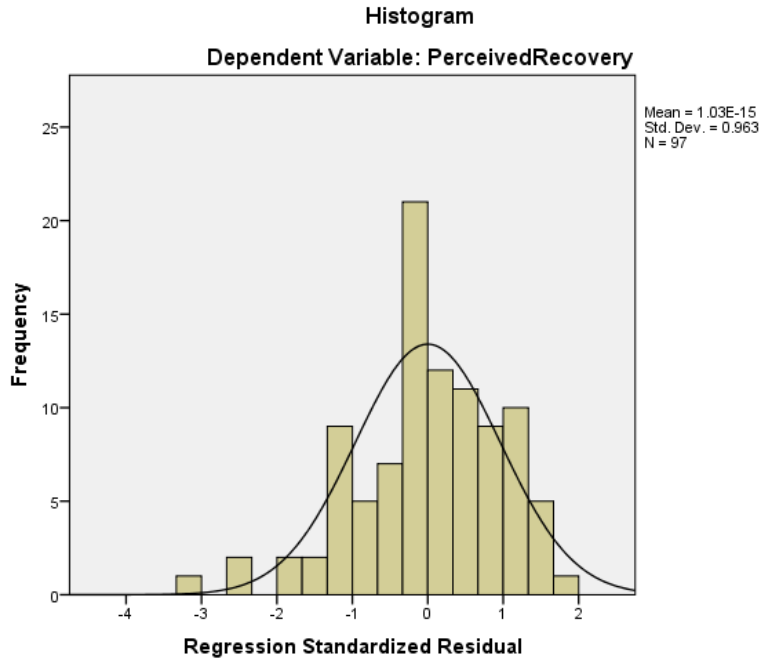

Figure 1. Distribution of scores on the PR-SH

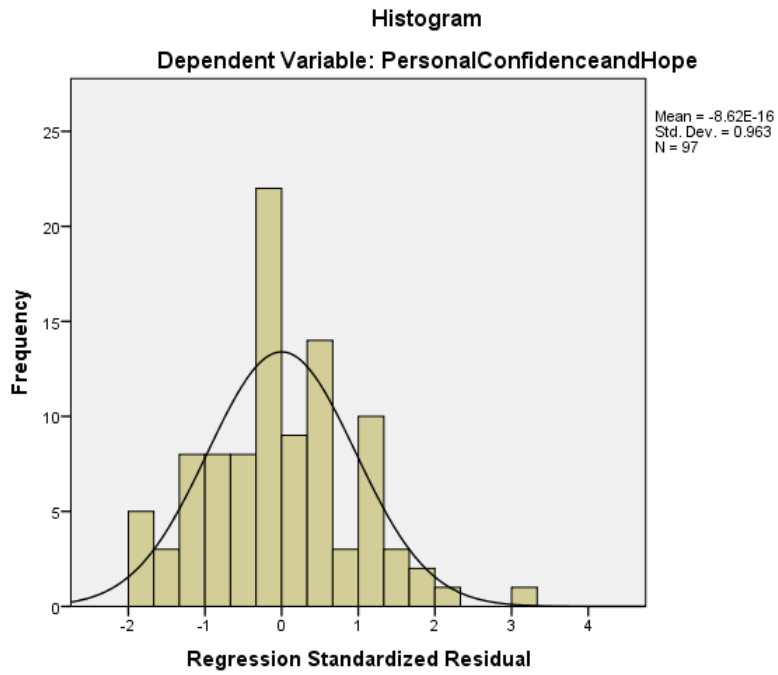

Figure 2. Distribution of scores on Personal Confidence and Hope scale

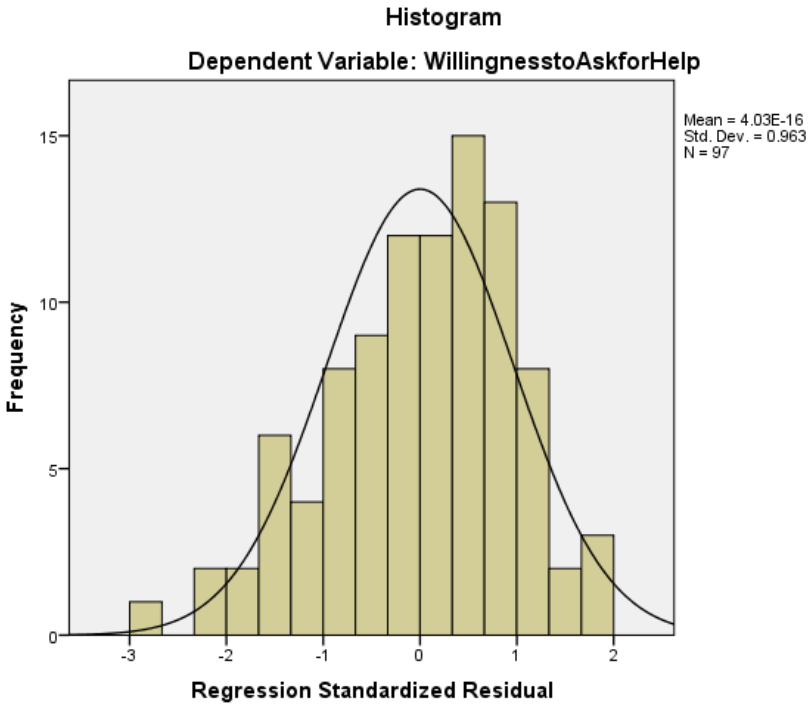

Figure 3. Distribution of scores on the Willingness to Ask for Help scale

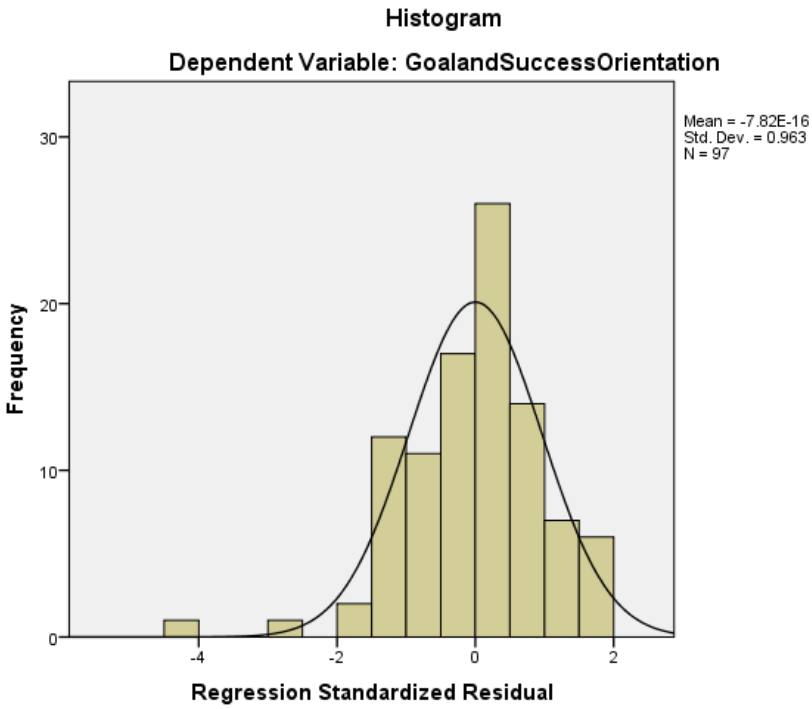

Figure 4. Distribution of scores on the Goal and Success Orientation scale

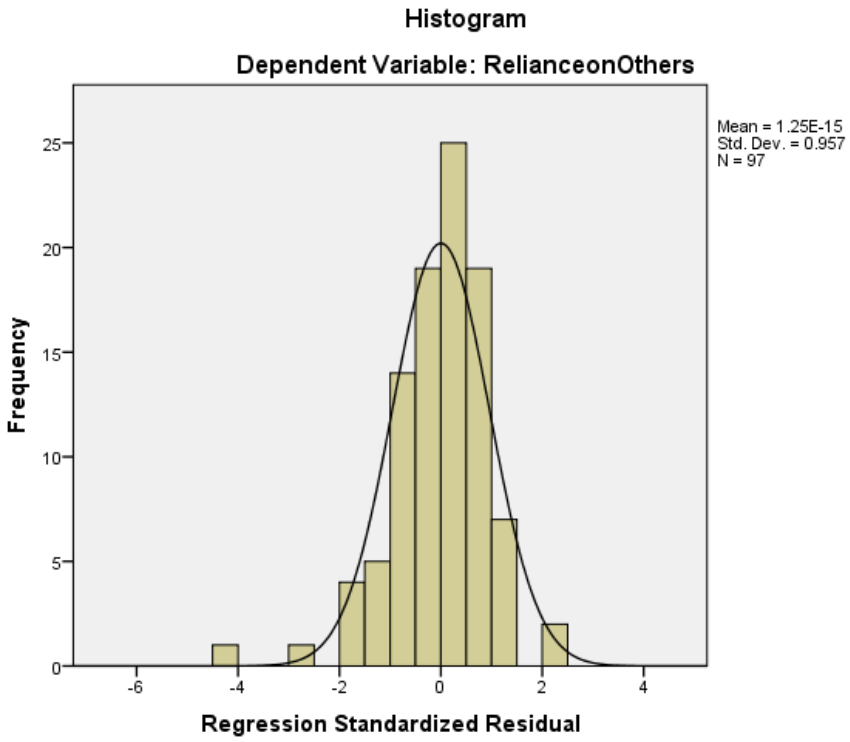

Figure 5. Distribution of scores on the Reliance on Others scale

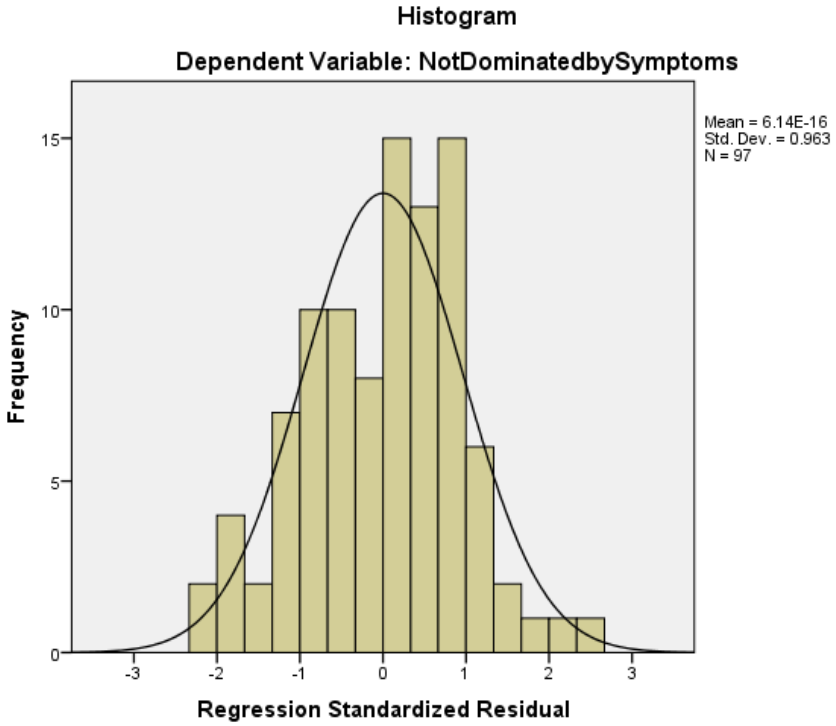

Figure 6. Distribution of scores on the Not Dominated by Symptoms scale

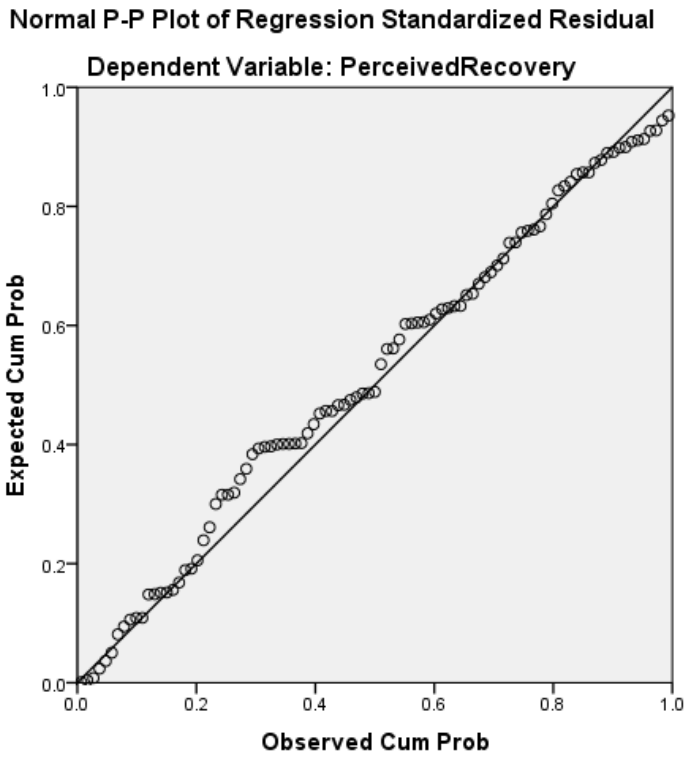

Figure 7. Normal probability plot of standardized residuals for the PR-SH

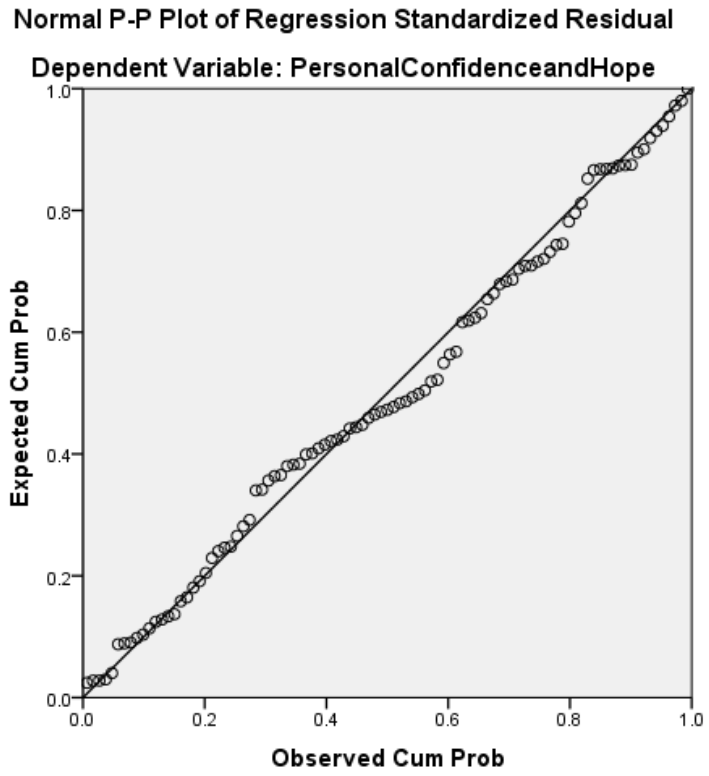

Figure 8. Normal probability plot of standardized residuals for Personal Confidence and Hope scale

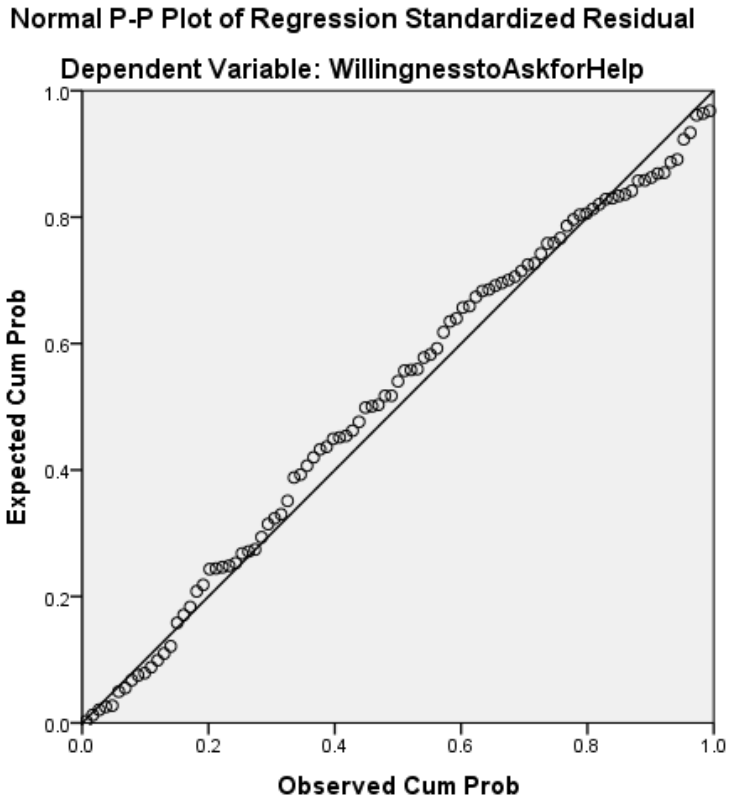

Figure 9. Normal probability plot of standardized residuals for the Willingness to Ask for Help scale

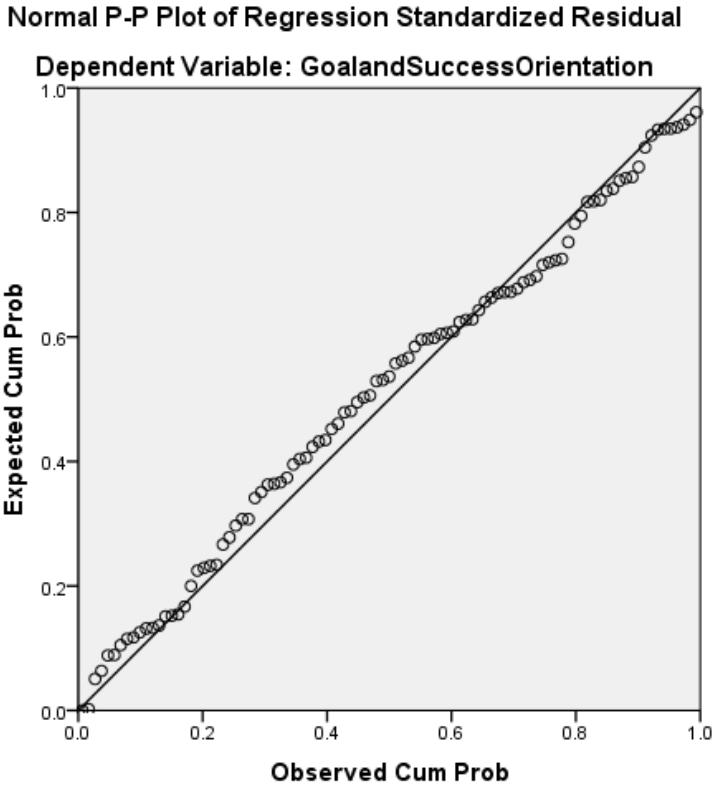

Figure 10. Normal probability plot of standardized residuals for the Goal and Success Orientation scale

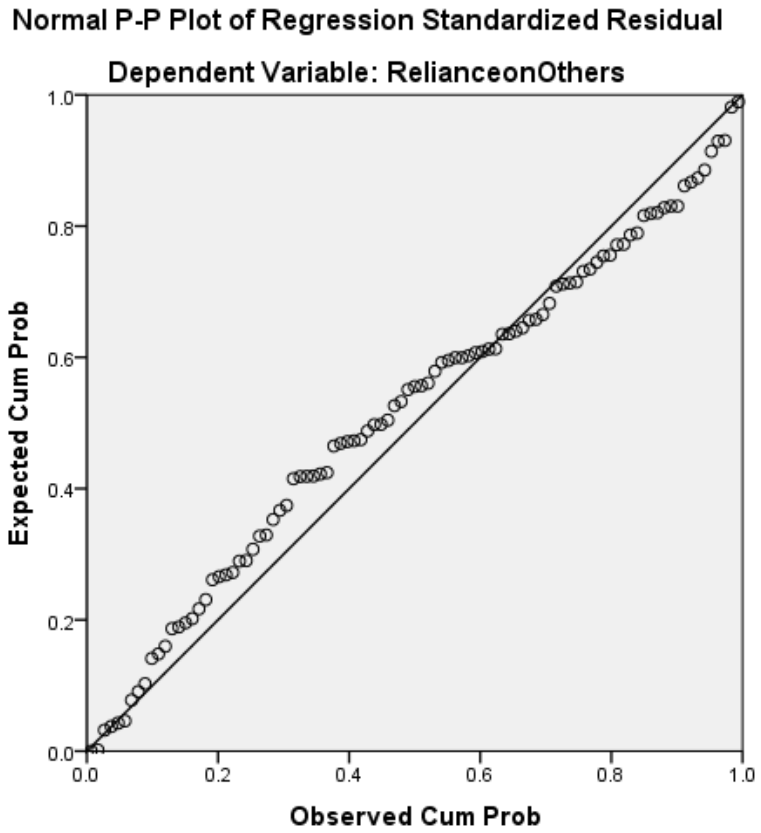

Figure 11. Normal probability plot of standardized residuals for Reliance on Others scale

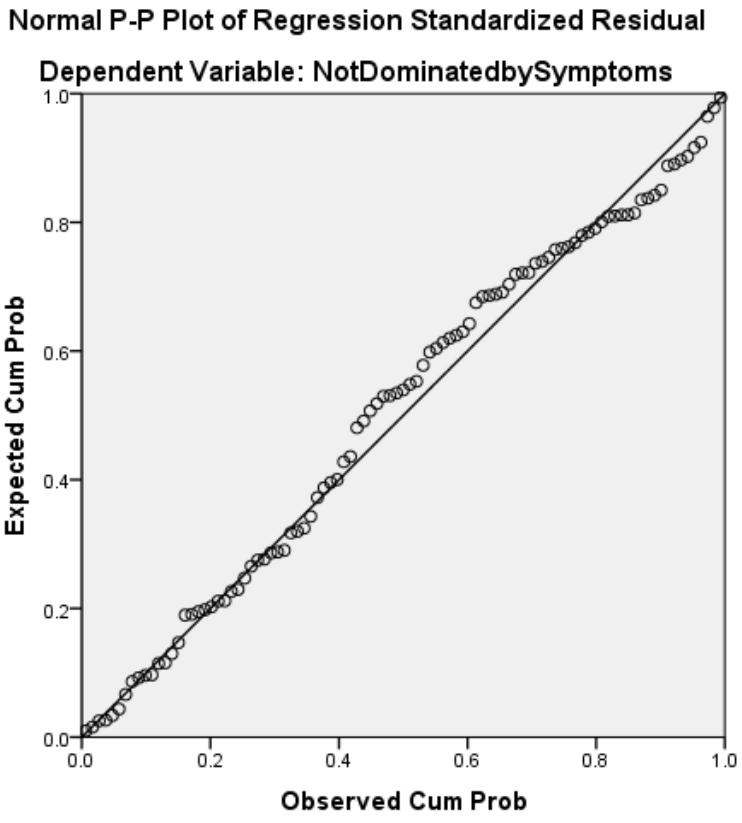

Figure 12. Normal probability plot of standardized residuals for Not Dominated by Symptoms scale

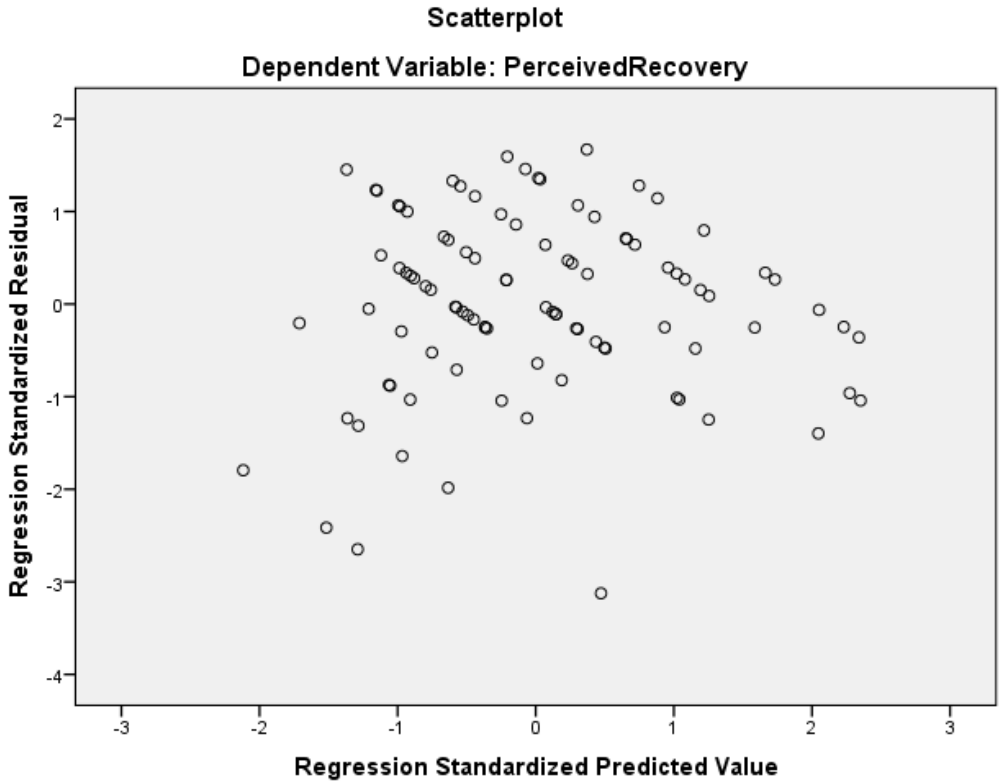

Figure 13. Scatterplot of Standardized Residuals for the PR-SH

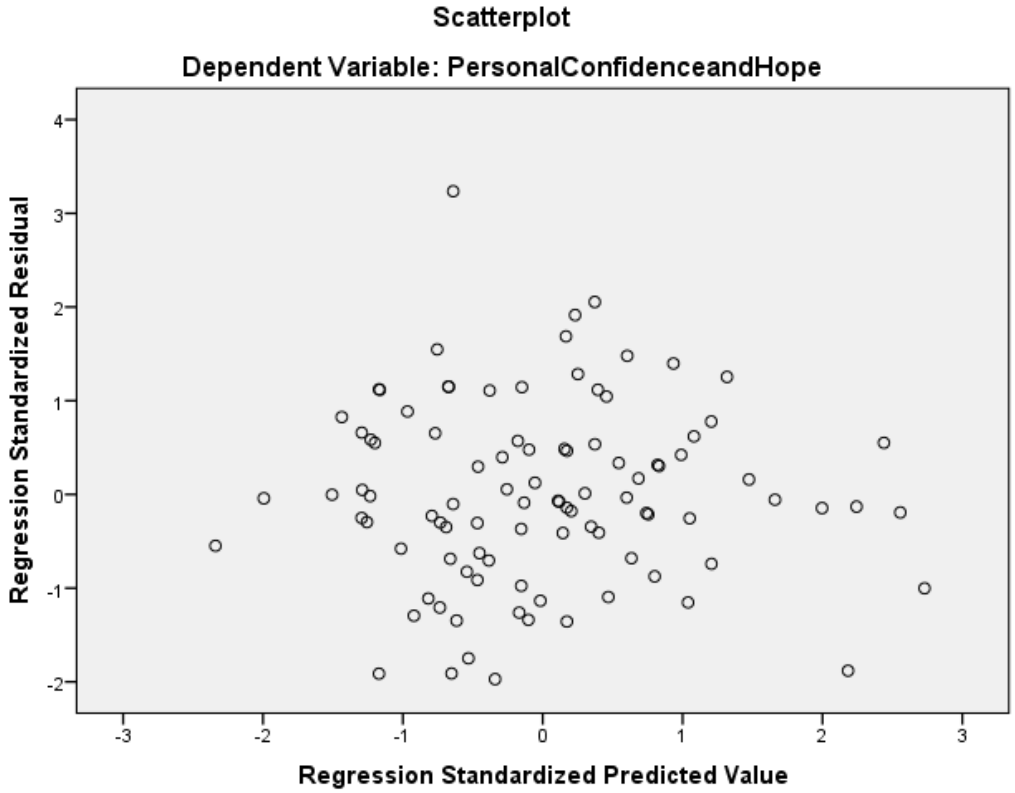

Figure 14. Scatterplot of Standardized Residuals for Personal Confidence and Hope subscale

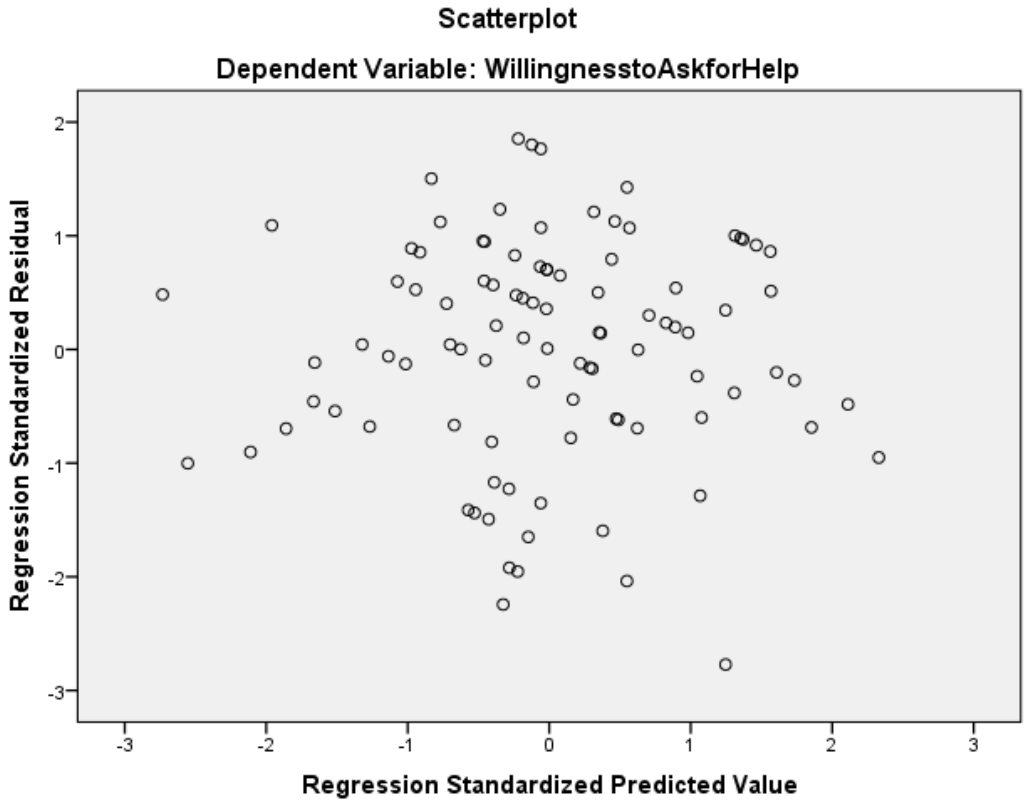

Figure 15. Scatterplot of standardized residuals for the Willingness to Ask for Help scale

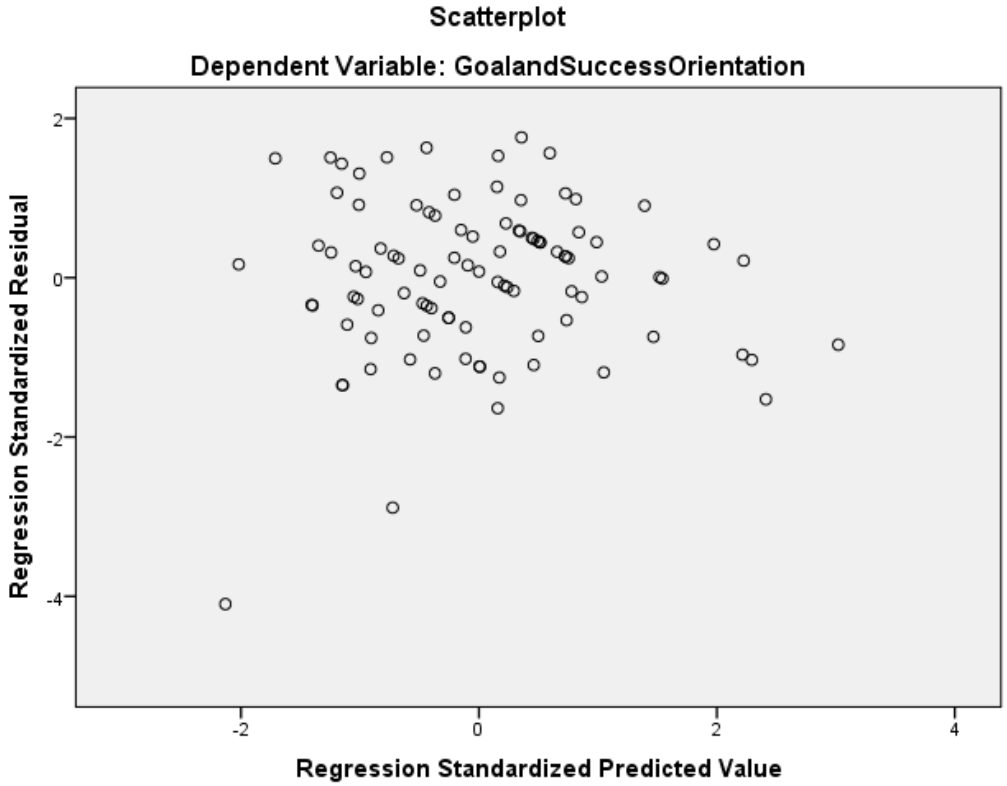

Figure 16. Scatterplot of standardized residuals for the Goal and Success Orientation scale

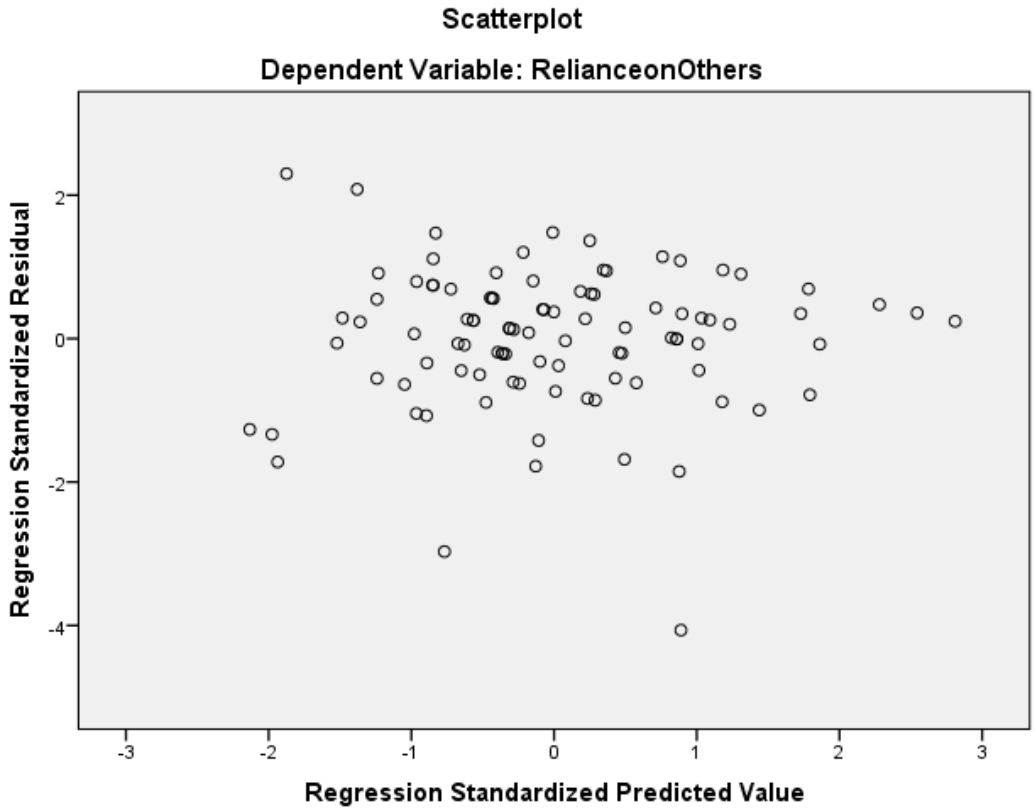

Figure 17. Scatterplot of standardized residuals for the Reliance on Others scale

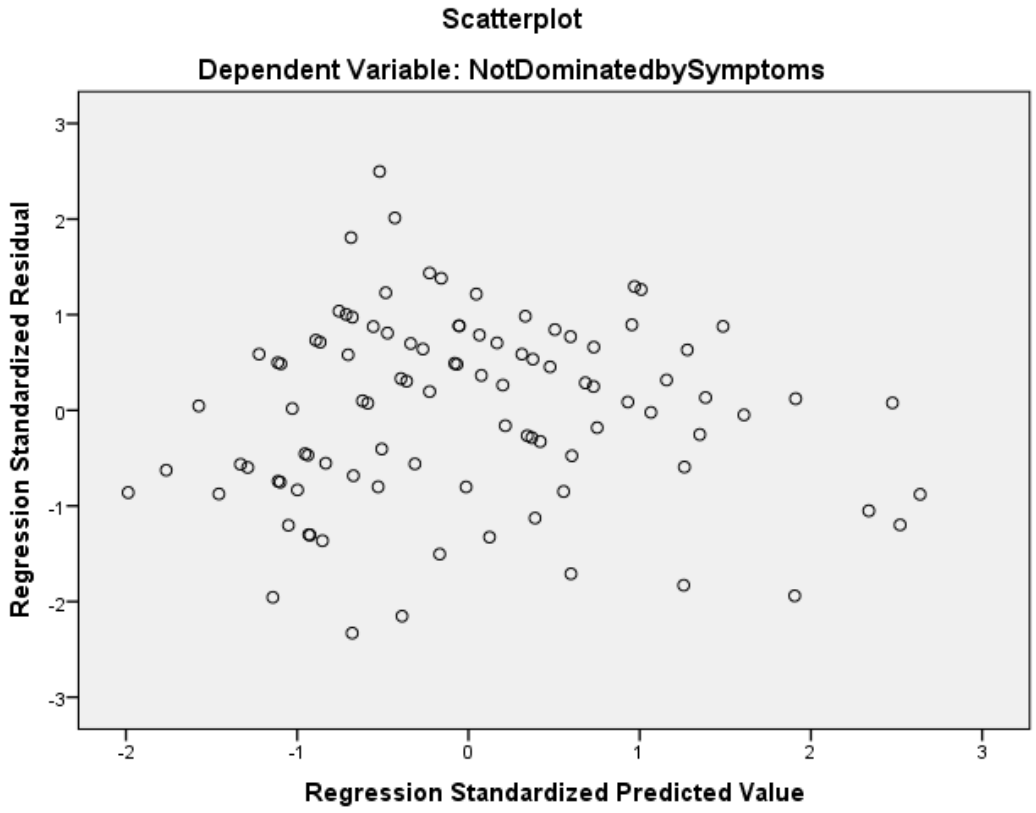

Figure 18. Scatterplot of standardized residuals for the Not Dominated by Symptoms scale

Table 1

Collinearity Statistics

Variable	Collinearity Statistics	
	Tolerance Value	Variance inflation factor (VIF)
PR-SH		
Current v ideal	0.57	1.74
Current v me SH	0.44	2.26
Current v other SH	0.46	2.18
SCSTotal	0.75	1.34
PCaH		
Current v ideal	0.57	1.74
Current v me SH	0.44	2.26
Current v other SH	0.46	2.18
SCSTotal	0.75	1.34
WtAfH		
Current v ideal	0.57	1.74
Current v me SH	0.44	2.26
Current v other SH	0.46	2.18
SCSTotal	0.75	1.34
GaSO		
Current v ideal	0.57	1.74
Current v me SH	0.44	2.26
Current v other SH	0.46	2.18
SCSTotal	0.75	1.34
RoO		
Current v ideal	0.57	1.74
Current v me SH	0.44	2.26
Current v other SH	0.46	2.18
SCSTotal	0.75	1.34
NDbS		
Current v ideal	0.57	1.74
Current v me SH	0.44	2.26
Current v other SH	0.46	2.18
SCSTotal	0.75	1.34

Note. PR-SH, perceived recovery from seld-harm; PCaH, personal confidence and hope; WtAfH, willingness to ask for help; GaSO, goal and success orientation; RoO, reliance on others; NDbS, notdominated by symptoms. Tolerance scores below .20 and average VIF scores greater than 5 indicate that multicollinearity may be present (Menard, 1995; Hair, Anderson, Tatham et al., 1995).